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ABSTRACT

This document presents 13 papers that are intended to serve as a professional development resource for language, literacy, and numeracy practitioners and others involved in enterprise-based training provision in Australia and to provide a framework for evaluating workplace language, literacy, and numeracy programs. The following papers are included: "Workplace Assessment and Training Delivery Model" (Jo Crothers); "Analysis of National Standards against Workplace Tasks" (Bruce Milne); "Integrating LLN (Language, Literacy, and Numeracy) into Gap Training and Assessment" (Bruce Milne); "A Case Study in 'Learning Organizations' and New Initiatives in Practice" (Sharon Wiles); "Numeracy and Literacy and the Certificate of Agriculture" (Julie Miller); "Integrating LLN with a Training Package: An Alternative Approach" (Sally Mitchell); "Identifying Enterprise Goals and Delivering Needs" (Sally Mitchell); "Too Many Words: Training in a Factory Environment" (Vanessa Lynne); "A Course in Applied Vocational Study Skills (CAVSS): Team Teaching as a Strategy for Integrating Literacy in VET (Vocational Education and Training)" (Susan Bates); "Finding the Best Training Options to Meet Organization Goals" (Bruce Milne); "Addressing Issues in Sawmills" (Ruth Bakker); "On-Farm Training Delivery" (Helen Fletcher); and "Evaluating Literacy and Numeracy in Training Packages: A Framework and Some Issues" (Ian Falk, Pat Millar). (Twenty-nine tables/figures/information sheets are included. The bibliography lists 35 references.) (MN)

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Workplace Communication

Making Language, Literacy and Numeracy in Training Packages work

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Workplace communication:

Making Language, Literacy and numeracy in training packages work

Literacy and Learning Series, No.3

Workplace Communication

Making Language, Literacy and Numeracy in Training Packages work

Adult Literacy and Numeracy Australian Research Consortium (ALNARC)

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Susan Bates

Susan Bates began teaching adult literacy in 1983, and has been involved in policy, curriculum and professional development in the adult literacy field since 1991. She developed the Course in Applied Vocational Study Skills (CAVSS) after extensive work with TAFEs and private providers to trial models for integrating literacy support for VET students. She is currently employed by the Western Australian Department of Training, developing and delivering Professional Development training and products for CAVSS in Western Australia and as part of an ANTA National Project.

Jo Crothers

Jo Crothers is Team Leader of Workplace Learning Services, the Institute of TAFE Tasmania's delivery unit for the Workplace English Language and Literacy (WELL) program. Jo began working in the VET sector in 1980, as a literacy coordinator and volunteer tutor. She has a strong and continuous interest in assessment practices and issues and in 1996 wrote a booklet entitled *RPL: Getting Credit where it's Due.*

In recent years, Jo has contributed to the establishment of a quality assured assessment system within the Institute of TAFE Tasmania and is a member of the Tasmanian Workplace Assessor and Trainer network.

Ian Falk

Professor Falk is the Director of the national Centre for Research and Learning in Regional Australia (CRLRA) at the University of Tasmania, Launceston, Australia. CRLRA is responsible for investigating issues related to formal and informal learning policy and practice. Ian has a track record in sociology, social and community development and wellbeing, social capital research, learning communities, regions and cities, adult literacy, socio-linguistics and ethnomethodology. Ian also has a research record in leadership as community change management with keynote talks to major Leadership foundations nationally. He has a track record, skills and knowledge in policy development, theory and practice, along with a long experience in rigorous and empirical qualitative research methods and techniques. Major recent projects include an analysis of ten regions nationally showing the impact of collaborative partnerships on the effectiveness of learning systems. Another project analysing nine regions for the Victorian State Government showed the impact of adult and community education social interventions on those communities, and a comparative study of two whole communities in rural Victoria to establish profiles of community capacity and trust.

Helen Fletcher

Helen Fletcher is a management and training consultant based in Toowoomba Queensland. One of the major clients of her company, Fletcher Consulting Pty Ltd, is The BGL Alliance, a group of pork producing companies based in Queensland, New South Wales and New Zealand. While maintaining a broad client base, one of Helen's major assignments is to manage the training and quality programs for the Alliance.

John Guenther

John Guenther is a research fellow with the Centre for Research and Learning in Regional Australia based in Launceston at the University of Tasmania. He is also an IT training consultant and provides training in the ACE sector in northern Tasmania. His research experience includes several projects relating to VET, community capacity and literacy and numeracy.

Vanessa Lynne

Vanessa Lynne is an adult educator and facilitator with vast experience working in community education projects.

During her career Vanessa established and coordinated Australia's first Peace Education Project, the successful Promoting Adolescent Sexual Health (PASH) Project and the multi-award winning Kidlink Early Intervention Program.

Vanessa is also a published short story and technical writer specialising in communication skills. She currently coordinates a large training project in industry on behalf of West Coast College of TAFE.

Pat Millar

Pat Millar is the Tasmanian Coordinator of the Adult Literacy and Numeracy Australian Research Consortium. Her research interests include literacy, community development, and social capital. She is presently working on a PhD thesis on literacy practices in a socioeconomically disadvantaged community.

Julie Miller

An experienced teacher, Julie Miller became a VET coordinator three years ago. Currently based at Launceston College in Tasmania, Julie is responsible for the delivery of vocational education to Year 11 and 12 students. A goal of Julie's is to make VET accessible to students from diverse academic backgrounds

Bruce Milne

Bruce Milne has been employed by the Institute of TAFE Tasmania for four years in the capacity of workplace assessor, trainer and project coordinator in a variety of enterprises and in a range of industry sectors. Bruce's main role is developing and coordinating assessment and training systems in industry. This involves training and support for workplace assessors / trainers and development of assessment / training resources.

Sally Mitchell

Following the completion of a Bachelor of Agricultural Science at the University of Tasmania Sally commenced employment with Comalco Aluminium (Bell Bay) Limited in 1981 as an Analytical Chemist. After six years in this role she moved to the Personnel Department as Employment Officer for two years. This was followed by a short period with the Commonwealth

Employment Service (CES) and the Australian Maritime College before the birth of her first child. Over the next 10 years Sally worked in various roles for Adult Literacy and Basic Education, later moving in to Workplace Learning Services. Initially her work focussed on Labour Market Programs, covering areas such as Occupational Health and Safety, Industrial Relations and Discrimination issues, and then developing projects in different workplaces with Workplace English Language and Literacy (WELL) funding.

Robeka Smith

Coming from a professional background in science, where she was employed as a Microbiologist, Robeka developed a particular interest in the literacy and numeracy skills required by production workers. Following a brief career as a Maths and Science teacher, Robeka began working in the field of enterprise-based training and assessment. She now specialises in provision of literacy and numeracy support within enterprises.

Sharon Wiles

Sharon Wiles has been committed to the Language, Literacy and Numeracy field for many years. Her contribution has extended across a range of activities in TAFE, industry, and the South Australian Council for Adult Literacy.

While based in South Australia with TAFE for seventeen years she introduced the first distance literacy program using applied technology, which gained state, national and international recognition. She received several awards in the International Literacy Year 1990, including the National Achievement Award. She has been involved in the development and production of a variety of promotional/marketing tools including videos, articles on LLN, and in a number of national projects relating to LLN.

Since moving to Tasmania three years ago she has become a consultant. She recently completed facilitating a 'Reframing the Future' project focusing on a review of the implementation of the Training Packages in the Forest and Forest Products Industry.

Acronyms

CAVSS	Course in Applied Vocational Study Skills
EBAT	Enterprise based trainer / assessor
ITAB	Industry Training and Advisory Board
LLN	Language, Literacy and Numeracy
NRS	National Reporting System
NTF	National Training Framework
NYC	Not yet competent
SOP	Standard Operating Procedure
WELL	Workplace English Language and Literacy
WLS	Workplace Language Services
RCC	Recognition for Current Competency

Part 1 New ways of working together

In Part 1 Jo Crothers puts forward a model for workplace assessment and training delivery. The model includes a series of steps that begins with establishing the need for training and concludes with issuing qualifications to learners.

The process takes into account the needs of the organisation, needs for inclusiveness among employees, the requirements of Training Packages and the needs of individual participants. The model demonstrates that language, literacy and numeracy issues can be effectively managed in the context of a workplace and enterprise based training.

Workplace assessment and training delivery model

Jo Crothers

Introduction

Workplace Learning Services (WLS) is a small delivery unit that has coordinated the Workplace English Language and Literacy (WELL) program within the Institute of TAFE Tasmania for nearly a decade. The central aim of the WELL program is to assist workers with integrated, workplace based language and literacy activities that enable them to meet the demands of their current and future employment and training needs.

Workplace Learning Services operates entirely off-campus, in enterprises representing all industry sectors across the state. From this broad experience, WLS has evolved a delivery model containing several essential features which reflect an enterprise-based delivery structure. The most important of these is the enterprise-based trainer / assessor (EBAT), a person who is a literacy practitioner and who also has Assessment and Workplace Training qualifications and experience.

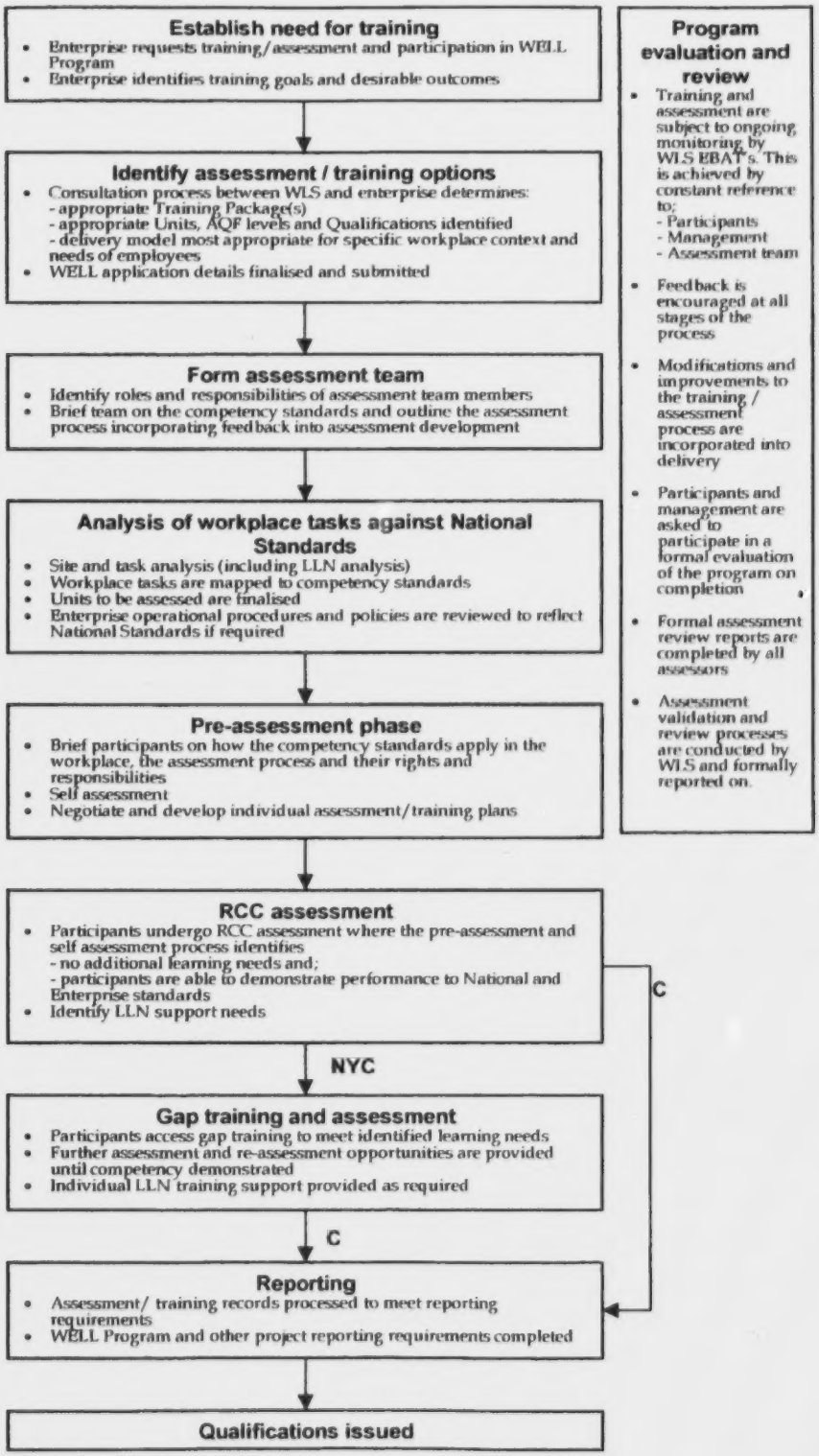
EBATs are selected for their best fit with the enterprise participating in the WELL program. An EBAT must have knowledge (sometime fast-tracked) of the relevant industry. They must demonstrate qualities such as sensitivity and respect for the enterprise culture, an understanding of adult learning principles, a high degree of flexibility, and an understanding of competency-based assessment and recognition processes.

Example

> Gabrielle has been an EBAT for six years. She works in several industry sectors and her wide-ranging experience has equipped her to operate flexibly across a number of different Training Packages. One of her key strengths is her ability to communicate well with people at all levels and to make the language, concepts and intent of the National Training Framework clear to all.

Figure 1 illustrates the delivery model of Workplace Learning Services. The model reflects the primary aim of Workplace Learning Services, which is to establish effective, participatory and sustainable learning and assessment partnerships with enterprises within the context of the WELL program.

Figure 1 - TAFE Tasmania – Workplace Learning Services
Workplace Assessment and Training Delivery Model


Establish need for training
• Enterprise requests training/assessment and participation in WELL Program
• Enterprise identifies training goals and desirable outcomes
Identify assessment / training options
• Consultation process between WLS and enterprise determines:
- appropriate Training Package(s)
- appropriate Units, AQF levels and Qualifications identified
- delivery model most appropriate for specific workplace context and needs of employees
• WELL application details finalised and submitted
Form assessment team
• Identify roles and responsibilities of assessment team members
• Brief team on the competency standards and outline the assessment process incorporating feedback into assessment development
Analysis of workplace tasks against National Standards
• Site and task analysis (including LLN analysis)
• Workplace tasks are mapped to competency standards
• Units to be assessed are finalised
• Enterprise operational procedures and policies are reviewed to reflect National Standards if required
Pre-assessment phase
• Brief participants on how the competency standards apply in the workplace, the assessment process and their rights and responsibilities
• Self assessment
• Negotiate and develop individual assessment/training plans
RCC assessment
• Participants undergo RCC assessment where the pre-assessment and self assessment process identifies
- no additional learning needs and;
- participants are able to demonstrate performance to National and Enterprise standards
• Identify LLN support needs
C
NYC
Gap training and assessment
• Participants access gap training to meet identified learning needs
• Further assessment and re-assessment opportunities are provided until competency demonstrated
• Individual LLN training support provided as required
C
Reporting
• Assessment/ training records processed to meet reporting requirements
• WELL Program and other project reporting requirements completed
Qualifications issued
Program evaluation and review
• Training and assessment are subject to ongoing monitoring by WLS EBAT's. This is achieved by constant reference to;
- Participants
- Management
- Assessment team
• Feedback is encouraged at all stages of the process
• Modifications and improvements to the training / assessment process are incorporated into delivery
• Participants and management are asked to participate in a formal evaluation of the program on completion
• Formal assessment review reports are completed by all assessors
• Assessment validation and review processes are conducted by WLS and formally reported on.

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Identifying training needs and delivery options

DETYA promotes the WELL program to a range of industry and groups across the state. Support from Industry Training Advisory Boards (ITABs) and employer organisations augment this promotional activity. Networking between participating enterprises further spreads the word about the value of the WELL program. Workplace Learning Services coordinators help enterprises to better appreciate the role, importance and integrated nature of effective workplace communications and encourage them to apply for WELL funding to support their strategic operations and to help meet their enterprise goals.

There is a diverse range of options available to enterprises to assist them to address their assessment and training needs. The following scenario describes one such option.

Example:

> A large employer in the Dairy Processing industry identified the need for training to implement a Quality Control system. They required assistance in identifying training / assessment options and providing learning support for their employees. The enterprise employed over 200 workers, the majority of whom are production workers possessing no formal vocational qualifications. A number of employees on the site were qualified as assessors but were relatively inexperienced. Through a WELL-funded program it was determined that workers could obtain formal training in the implementation of the new quality system. Assessment in operating the new system would allow workers to gain formal outcomes against five core units of the Food Processing Training Package.

Identification of training needs can also be addressed effectively at and industry level. In Part 4 Addressing literacy and numeracy at the industry level (page 91) two cases studies demonstrate how planning and cooperation at an industry level can be used to produce enterprise specific outcomes. Ruth Bakker's case study "Addressing issues in sawmills" (page 93) illustrates a cooperative approach to planning and needs identification in the forestry industry. Helen Fletcher's case study "On-farm training delivery" (page 99) illustrates a cooperative approach to developing training strategies in the pig industry in one Australian state.

Forming assessment teams to compare tasks with national competencies

EBATs work closely with their industry-based partners to form assessment teams, a recognised approach to assessment suggested in most Training Packages. Assessment teams maximise site expertise and share responsibility for designing and developing assessment and training activities. Members of assessment teams learn together about the structure and implementation of Training Packages, select relevant units of competency, interpret evidence guides to reflect enterprise requirements and decide on valid, fair and flexible assessment methods.

Example:

> Jon is an industry-based assessor who participated in a short (Three day) assessor training program. When he returned to his workplace he found he had limited opportunity to practice and refine his assessor skills in a supported learning environment. The assessment team activity Jon now participates in allows him to develop his assessor competencies and maintain the currency of his qualifications.

One of the first tasks of the assessment team is to spend time reading the Training Package and analysing the assessment guidelines and competency standards as well as existing policies and procedures sourced from workplace documentation. This activity helps the assessment team identify the language, literacy and numeracy demands made of workers and the level of skills required.

Following this analysis, the assessment team spends time with individual workers observing the tasks and duties they perform as part of their job. Again, this process is important in helping the team to identify language, literacy and numeracy issues in the workplace.

Key questions posed by assessment teams include:

- Do the tasks performed by the workers meet the National Standards? In other words, do workers' jobs align with the elements and performance criteria described in the competency standards?
- Is it possible to gather enough evidence to demonstrate competence?

- What evidence would need to be collected?
- How and by whom does the evidence need to be collected?

Bruce Milne's case study, "Analysis of national standards against workplace tasks", (page 21) provides a detailed illustration of how a small state-wide group of Workplace Learning Services EBATs analysed competency standards prior to conducting assessment.

Pre-assessment and RCC

Each employee in the target group is interviewed as part of the RCC (Recognition of Current Competency) process. The interview is largely an informal, non-threatening process that includes the following important aspects.

- Taking the assessee through the standards and explaining how they apply in the workplace
- Providing opportunity for a preliminary self assessment
- Identifying learning support needs
- Identifying assessment options/evidence sources

Through this process, the EBAT is able to develop an individual assessment / training plan in collaboration with the assessee. Sharon Wiles' case study in learning and new initiatives to practice (page 27) illustrates how RCC can be effectively included as part of the process.

RCC assessments are conducted on the basis of the individual assessment / training plans developed in the pre-assessment phase. The assessment team in collaboration with the assessee begin the process of collecting multiple sources of evidence to support competency against the relevant standards. This evidence typically consists of:

- Workplace observations (conducted over a period of time in a number of contexts)
- Oral questioning
- Work samples
- Witness testimonials
- Workplace documentation

The assessment team work alongside site assessors to provide mentoring and support through this process. In this way, the quality and consistency of the assessment process is monitored and site assessors can benefit from working with other experienced assessors to improve their own skills.

Gap Training and assessment

Where language, literacy and numeracy skill gaps are identified, these are addressed in the context in which they appear, as on-the-job learning and not as a separate or isolated activities. The learning activities developed to achieve this skill development are planned to have direct relevance to actual workplace activity, or other training and / or strategic workplace developments.

Example

> Although competent in most aspects of her job, Jen consistently made mistakes with the storage and retrieval of products. An RCC assessment revealed that her understanding of the company's product coding system was limited. A specific training program was designed to build Jen's underpinning knowledge of this aspect of her job.

Several case studies in this book provide practical examples of ways that gap training and assessment can be implemented in various contexts. Susan Bates' case study on CAVSS (page 81) shows training conducted in a team teaching approach. Sally Mitchell's case study: "Identifying enterprise goals and delivering needs", (page 61) demonstrates how the process of gap training can be effected in an on-the-job context. Bruce Milne's case study "Integrating LLN into gap training and assessment" (page 23) provides and example from a local council.

WELL reports, NRS (National Reporting System) mapping, and assessment and training records are processed to meet reporting requirements.

Qualifications are issued according to assessment outcomes.

Program review and evaluation

All Workplace Learning Services projects are subject to evaluation and review. This is a continuous process throughout the project. During the life of a WELL project, a Workplace

Learning Services coordinator is on-site a regular basis to discuss progress and achievements and to make any necessary adjustments required.

In addition, all participants are asked to evaluate the WELL project through focus groups and evaluation forms. This feedback is used as a basis for ongoing improvement of the Workplace Learning Services delivery model.

The underpinning strength of the model

The strength of the WLS delivery model comes from four different but inter-related access and equity factors. These are detailed in this section.

Development and implementation of Training Packages

Training Packages provide "a consistent and reliable set of nationally endorsed components for training, recognising and assessing people's skills" (ANTA 1999). Because competency standards identify the skills and knowledge required for a particular industry, individual workers are able to gain recognition for competencies already achieved, and to more easily access training strategies for other skills and knowledge required. Training Packages allow for:

- greater opportunities to establish flexible learning environments and assessment methods;
- the different learning needs of individual workers to be met; and
- increased relevance of assessment and training to the needs of the enterprise.

WLS embraced the changes to vocational education and training brought about by Training Packages, recognising them as a valuable tool for increasing opportunities for workers to gain formal qualifications which are directly linked to their jobs. Vanessa Lynne's case study "Too many words: training in a factory environment" (page 75) provides one example of the relevance of Training Packages for both industry and employers.

Inclusion of LLN competencies into industry standards

The International Adult Literacy Survey (OECD 2000) found that language, literacy and numeracy skills underpin almost all

areas of work. From the factory floor to the highest levels of management, language, literacy and numeracy skills influence the performance of all workplace tasks.

The importance of this finding was acknowledged at a national level in May 1995 when the Commonwealth, State and Territory Ministers for Vocational Education and Training agreed that English language, literacy and numeracy competencies must be incorporated into competency standards. In other words, the speaking, listening, reading, writing and numeracy skills, which are part of a competency, must be assessed in the context of workplace performance.

Assessors and workplace trainers are reminded, as noted in the Assessment Guidelines of their Training Package, of their responsibility to effect the Ministerial Council decision.

LLN issues in assessment

Language, literacy and numeracy (LLN) issues need to be taken into account when designing assessment methods and tools. The language, literacy and numeracy requirements in the assessment process should mirror the language, literacy and numeracy requirements of the competency being assessed. Language, literacy and numeracy should be assessed within the context of the person's job/role function. As Julie Miller's case study "Numeracy and literacy and the Certificate of Agriculture" (page 39) demonstrates, the competencies specified in a Training Package may need to be rewritten in the terms of the workplace so they are relevant to the participants.

Figure 3 and Figure 4 below show how WLS practitioners record language, literacy and numeracy competencies that are part of workplace activity and then note how they align with the relevant competency standards.

Figure 2 - LLN Task analysis

LLN Task Analysis

Assessor:

Job Description	
Department	
Enterprise	

Roles and responsibilities in the workplace	LLN Analysis
Operate machinery safely Report hazards to supervisor Keep work area tidy Fill out appropriate records	**Speaking/listening** Reports hazards to supervisor **Writing/Reading** Reads and understands policies and procedures Records information on accident/incident report forms **Calculations**

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Figure 3 - Competency standards mapping

Competency Standards Mapping

FDF CORCOM1A Communicate in the workplace

Position Description	
Department	
Enterprise	

Elements and performance criteria	Workplace Application (roles and responsibilities) aligning to competency standards	Sources of Evidence
Exchange verbal communication Information requirements are identified Questions are asked to seek advice and clarify information Interactive skills are used to communicate effectively with others	**Example:** Shift changeover briefing (verbal)	**Example:** Observation Third Party reports Self Assessment
Locate and use workplace information Routine workplace texts are located and used to obtain information required to operate in the workplace	**Example:** Locate product specifications to confirm product requirements	**Example:** Observations, Questions, Witness Testimony, Self Assessment
Record routine workplace data Routine data is recorded to meet company requirements	**Example:** Record testing results Input data to create pallet labels	**Example:** Work samples, Questions, Observation, Self Assessment

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The Workplace Learning Services' delivery model as described above suggests a front-end approach to delivery of a WELL project. This means that before any assessment or training is undertaken, EBATs spend time listening, observing and absorbing the context of the enterprise to gain an in-depth understanding of the culture, constraints and commercial goals. This preliminary activity includes shadowing individual workers as they undertake routine workplace activities. EBATs identify what communication skills are required and how these skills must be demonstrated in the workplace. The case studies in this book provide several examples of integrated practice and show a variety of ways that integration can be achieved. For example, Sally Mitchell's case study "Integrating LLN with a Training Package: an alternative approach" (page 55) demonstrates how innovative approaches can be used to integrate LLN with Training Packages.

From their experience in implementing Training Packages, WLS practitioners have observed compelling evidence to support the decision to integrate language, literacy and numeracy competencies into industry standards. In particular, integration has resulted in greater opportunities for workers to gain formal recognition of competency irrespective of their general language, literacy and numeracy levels.

Recognition of Current Competency prior to LLN assessment

Workplace Learning Services' implementation of this approach is consistent with the structure and intent of Training Packages and of the competency-based assessment process. Competency-based assessment against industry standards is now central to the vocational education and training system as conceived within the National Training Framework (ANTA 1999).

In comparison to the traditional curriculum approach, where training programs were often conducted outside the workplace and followed by assessment of the skills and knowledge acquired from the training program, Training Package implementation has resulted in a continuum focussing on workplace performance that can be represented as:

Learning → Assessment → Training

The change reflects an acknowledgment that a significant majority of Australian workers has already developed

competencies through informal or incidental learning from the work in which they are currently engaged without necessarily attending a formal training program.

Example

> Brett, who has worked for three years as a cleaner in a small electrical enterprise, gained recognition (RCC) for the following two core units of competency from the Asset Maintenance Training Package:
>
> PRMCL33A Plan for safe and efficient cleaning activities, and
>
> PRMCL34A Follow relevant OHS policies and procedures to ensure own safety and that of others

In order to achieve equitable outcomes in vocational education and training, WLS practitioners do not conduct generic language, literacy and numeracy assessments before competency-based assessment against industry standards. Rather, individual language, literacy and numeracy needs related to workplace competency are identified after an initial competency-based assessment. If workers are assessed to be 'not yet competent' support and opportunities for further practise are offered through learning activities integrated with technical skills development. The support strategies employ a range of methodologies that recognise diverse learning needs and styles and can include guided practice of required tasks in the workplace and individual tutoring and / or mentoring.

Any additional language, literacy and numeracy skill development required by individual workers is addressed as specific on-the-job learning and not as a separate or general language, literacy and numeracy activity. Where possible, learning activities are planned and developed in collaboration with work teams so they:

- have direct relevance to actual workplace requirements;
- contribute to improved work practices such as developing standard operating procedures; and / or
- link with strategic workplace developments such as the introduction of a quality system.

Example

> Brett was assessed as 'not yet competent' against a third core unit in the Asset Maintenance Training Package (PRMCL35A Maintain a cleaning storage area) because he was unable to demonstrate correct calculations for product requirements and mixing dilution rates. Brett worked with an EBAT on some practical calculation activities related to the unit. With assistance from the EBAT, Brett developed a standard operating procedure (SOP) which clearly explained the calculations according to requirements. This was validated by Brett's supervisor and Brett was re-assessed and judged to be competent.

The WLS operating framework and philosophy supports the development of inclusive assessment and training methods and processes in which all workers participate. This approach does not marginalise or isolate individuals who have been reluctant to participate in formal assessment and training, often because the language, literacy and numeracy demands of the assessment and training have been greater than those required in the job itself.

The establishment of inclusive processes ensures equal access to assessment and training opportunities and the chance for all to succeed in achieving competency. Equality of access also means increased participation and confidence by those workers who have previously been inhibited by barriers and ensures individual workers receive deserved recognition of job competency. In addition to these benefits RCC assessment provides an opportunity to customise the training plan of each individual worker and to more closely identify and meet any subsequent learning needs.

Bruce Milne's case study "Finding the best training options to meet organisation goals", (page 87) illustrates how this inclusive approach works, and how learning and assessment activities can be built into a routine workplace context and contribute to mutually beneficial outcomes for both workers and employers.

Holistic assessment practices

An holistic approach is also consistent with the structure and intent of Training Packages. Units of competency represent smaller parts of a whole job and this should be considered when planning assessment and training processes.

When performing a job tasks such as communicating with others while operating safely in a team to produce quality products are naturally combined. Just as these separate parts of a job integrate when the whole job is performed competently, so assessment methodology can (and should) reflect this integration. In other words, holistic assessment should focus on assessing performance of the whole job rather than on the individual components of that job.

Example

> Liesel and members of her assessment team chose to use verbal questioning as a method to assess the underpinning knowledge of workers operating a sealing machine. The assessment team planned questions so that opportunities to confirm and reinforce communication competencies were given while assessing the technical competencies required for operation of the machine.

The WLS delivery model is popular with enterprise management and workers alike. This is largely due to the many benefits of holistic assessment practices. Holistic assessment practice integrates underpinning knowledge with workplace performance and ensures assessments are valid and fair.

More traditional approaches to assessment, such as assessing units of competency separately can duplicate effort and disadvantage workers by subjecting them to unnecessary and expensive over-assessment. In comparison, holistic assessment practices are cost-effective, time efficient and assess all the dimensions of competency within the context of real work tasks and conditions.

In the experience of WLS practitioners, holistic assessment provides a realistic approach to enterprise based assessment and training. From feedback, it is clear that these practices make good sense to the enterprise and the individual worker.

Summary

Each of the four factors described above supports the inclusive operating framework of Workplace Learning Services by:

- making assessment and training relevant to enterprises and individual workers
- minimising language, literacy and numeracy barriers to enable access to vocational education and training opportunities

- providing opportunity for the current competencies of workers to be recognised in a supportive learning environment, and
- ensuring fair, flexible and efficient assessment and training processes are in place.

Part 2 Matching competencies to workplace needs

Part 2 offers five case studies that demonstrate ways that elements of Training Package competencies can be integrated into workplace needs in a way that literacy and numeracy issues are included.

Bruce Milne contributes two case studies in this section. The first provides a detailed illustration of how a small state-wide group of Workplace Learning Services EBATs analysed competency standards prior to conducting assessment. The second illustrates how learning and assessment activities can be built into a routine workplace context and contribute to the business goals of the enterprise.

Sharon Wiles' case study shows how the culture of an enterprise has changed by the introduction of structured, accredited training and assessment and showcases the language, literacy and numeracy inclusive processes developed to support the achievement of the vision for training.

Julie Miller provides an example of how numeracy and literacy needs are addressed through the Certificate of Agriculture for trainees / students in a school-based vocational education and training context.

Sally Mitchell shows how a literacy and numeracy program, advertised as such, can be successfully integrated into a workplace using a Training Package.

Analysis of national standards against workplace tasks

Bruce Milne

Introduction

This case study provides a detailed illustration of how a small state-wide group of Workplace Learning Services EBATs analysed competency standards prior to conducting assessment.

The process of mapping workplace tasks against National Standards is critical to assessment and training. From the process, it was possible to establish the following:

- that the training goals expressed by the enterprise were achievable
- appropriate Units of Competency could be identified for assessment
- assessment options and sources of evidence could be identified on a State-wide basis to ensure consistency, flexibility and fairness in the process
- development of assessment tools and materials could begin.

What advantages are there for a company to ensure Certificate I qualifications?

Training need: Transport and distribution Certificate I

A state-wide enterprise identified a need to have all its workers qualified to Certificate 1 in Transport and Distribution. The enterprise employed approximately 80 people in a variety of tasks. The enterprise was keen to have existing skills recognised through a Recognition of Current Competence (RCC) process. While most employees were long term and had considerable experience, few had vocational qualifications and most had relatively low standards of educational attainment.

EBATs undertake assessments

In the early stages of the program, three EBATs were employed across the State to undertake the assessments. Their first task was to spend time reading the Training Package and analysing the assessment guidelines and competency standards. Secondly,

the assessors analysed existing policies and procedures sourced from workplace documentation. Finally, they embarked on a series of site visits where they spent time with individual workers observing the tasks and duties they performed as part of their job. Equipped with this information, all three assessors met to compare notes and map the workplace tasks to the National Standards.

What factors might help EBATs in this process of initial evaluation?

The EBATs considered whether the tasks performed by individual workers met the National Standards. This involved matching on the job tasks to performance criteria described in the competency standards. The assessors also considered if it was possible to gather enough evidence to demonstrate competence. They decided what evidence would be needed and how it was to be collected.

Conclusions

What integrated literacy and numeracy strategies could be used in this situation?

Through the collaborative efforts of all three assessors it was possible to reach the conclusion that the majority of workers were performing tasks at a sufficient level to enable RCC assessment to take place against seven units from the Certificate I in Transport and Distribution (the minimum requirement for a Certificate I qualification). A total of nine available units were assessed for suitability but it was agreed that two of the units would be inappropriate as they did not describe the type of tasks undertaken by workers in this particular enterprise.

This process also allowed the assessors to identify potential assessment methods and sources of evidence for the seven units identified. A key consideration here was the need for language, literacy and numeracy integrated assessment and support so as not to disadvantage workers with low skills in these areas.

In addition, it was possible to conclude that enterprise standards, policies and procedures aligned with National Standards meaning that there would be no need to review or develop new policies, procedures or systems on this work-site.

Integrating LLN into gap training and assessment

Bruce Milne

Introduction

This case study illustrates how learning and assessment activities can be built into a routine workplace context and contributes to the business goals of the enterprise.

This case study provides an insight into a training program where workers were required to train and be assessed for new skills. It acknowledges that:

- workplace training and assessment is more effective when it reflects the workplace context and tasks and provides an opportunity to learn through work
- assessment can be effectively integrated with training and need not be a summative and separate exercise
- training and assessment need to reflect the holistic nature of the workplace and the tasks performed. In this case study, the training and assessment for quoting and estimating, computing and workplace calculations were integrated to reflect the nature of the workplace task
- language, literacy and numeracy support is "built in" to training and not "bolted on" (ANTA 2000).

Council workers need new skills

A local council identified a need for 10 workers from their Works Department to obtain skills relating to:

- quoting and estimating
- computer skills.

The Workplace Learning Services (WLS) Enterprise Based Assessor and Trainer (EBAT) visited the site to discuss the enterprise needs and the level of training support that workers would require. This revealed a need for specific workers to acquire the skills and knowledge necessary to create quotes for jobs based on formal specifications and plans provided by management. It was suggested that basic computer skills were also required.

What level of consultation should the EBAT engage in during the assessment process?

Quotes and computer skills

What skills do and EBATs need to be able to perform these tasks for a specific enterprise?

The discussions established that workers had very little prior experience in providing quotes and few computing skills. There was no formal procedure or format for writing quotes in this department. However management indicated that all the workers had considerable experience in their particular fields and were considered to have the capacity to acquire the necessary skills.

Prior to commencing the training, in collaboration with management, the EBAT:

- developed a procedure and format for writing quotes that addressed enterprise needs
- obtained official job specifications and plans relating to the areas in which the training participants were employed.

The procedures and job specifications were then used as the basis for structuring training and developing assessment strategies.

The group of 10 participants met to consider the proposed training and assessment processes. All participants were given an overview of the procedures for providing quotes and estimates and were supplied with the necessary guidelines and resources.

The group was divided into three smaller sub-groups based on their area of employment - specifically roads and construction, carpentry and parks and gardens. Each group was provided with two job specifications and supporting plans and asked to produce a quote based on these tasks. While each participant was asked to provide an individual finished product, collaboration with the sub groups was encouraged. The whole process was supported by the EBAT.

This project-based approach had two main benefits as it allowed participants to

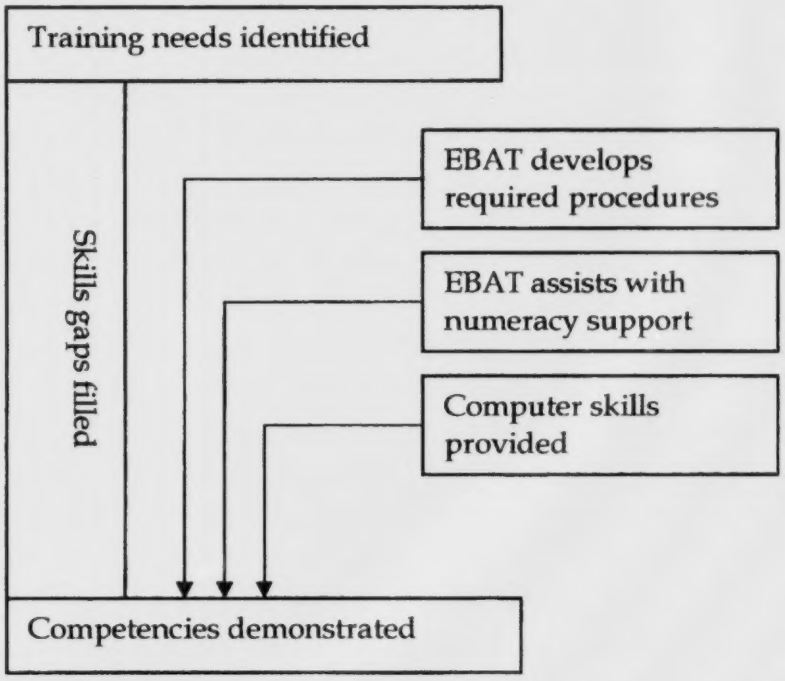
- learn and practise the required skills in the context of typical workplace requirements
- generate valid evidence for the purpose of assessment through the actual quotes that they were preparing as part of the learning process.

All training took place in the workplace training room reflecting the basically administrative / clerical nature of the job.

Language, literacy and numeracy issues arose in one of the sub-groups where all three participants acknowledged problems with workplace calculations essential to the completion of the project. Numeracy support was provided by the EBAT to assist participants in this specific area. Participants responded extremely well to this support as they were able to identify the relevance of these numeracy skills to their workplace tasks. The numeracy training was not separate, but built into the skills required for quoting and estimating.

What factors might contribute to a positive response from participants?

Figure 4 – Building skills to fill gaps



In the second stage of the training, participants were introduced to using computers and spreadsheets. The integration of computing into the training program benefited participants by

- enabling them to present their completed work in a professional and consistent format that reflected enterprise needs
- allowing them to experience the benefits and understand the relevance of the technology to their jobs. They were

learning how to use a computer to undertake a workplace task as opposed to learning how to use a computer with no practical focus

- generating more evidence to support assessments in the computing area. They did this by entering the information produced in the first part of the project and performing the necessary calculations on the spreadsheets.

In this context what factors might govern the way that computing skills are taught?

Figure 4 is a representation of the whole process. As can be seen the process of building skills to fill gaps was done by progressively building skills. A key to the success of the process in this case was the role of the EBAT who was able to facilitate and integrate learning so that it reflected the workplace environment.

What are some of the issues associated with teaching computing to those with low literacy and numeracy skills?

Conclusions

The case study provides a good example of a way that LLN can be integrated into the training required to enable employees satisfy performance criteria of Training Packages. In this case the EBAT facilitated the processes by identifying skill and knowledge gaps among employees and by providing the necessary support needed by employees.

A case study in 'learning organisations' and new initiatives in practice

Sharon Wiles

Introduction

This case study demonstrates the turn around in the culture of an enterprise that has been facilitated by the introduction of structured accredited training and assessment and showcases the language, literacy and numeracy inclusive processes developed to support the achievement of the vision for training. The focus of the case study is a manufacturing facility in the forest and forest products industry.

The forest and forest products industries

The Forest and Forest Products industry is the second largest manufacturing industry in Australia, employing approximately 60 000 people across six major industry sectors:

- Forest growing and management
- Harvesting
- Sawmilling and processing
- Manufacturing and merchandising
- Wood panel production and
- Paper production.

How does industry information impact assessment at an enterprise level?

The workforce is characterised by low levels of formal qualifications and limited literacy and numeracy skills. A recent survey found up to 30% of workers in the industry do not have the literacy skills necessary to do their tasks to the required standard. The workforce is predominantly male, with women comprising only fifteen per cent of the workforce.

The industry is often located in rural and remote regions. Whilst this has resulted in significant difficulties in sourcing quality training providers and programs in some regions, it has also provided opportunities to develop partnerships with training providers and quality enterprise based training programs.

Training in the industry has traditionally been on the job and unstructured, without formal recognition of the skills achieved by the majority of employees.

More recently, industry competency standards and assessment instruments have been developed nationally and have been well received by the industry as a means of implementing quality, structured training and skills recognition that is nationally consistent yet flexible enough to meet the needs of individuals and enterprises. Training Packages have been or are in the process of being developed for all sectors of the industry.

What assessment issues arise when working with a multi-site national organisation?

The Company

Oztimber Limited has five sites operating in three states. There are approximately 850 employees across the five sites. Oztimber, a discreet business unit, employs 132 full-time employees and seven casual employees and nine contractors. The manufacturing facility discussed in this case study is in a rural and somewhat isolated setting. Oztimber is involved in growing and managing forests, sawmilling and further processing, timber preservation and timber merchandising.

The changing demands in the workplace environment, (including improved technology and the implementation of a team based approach to work organisation), has required Oztimber to develop a strategic plan that will meet the challenges of the National Training Framework (NTF) in the context of its core business and future skills requirements.

The development of organisation-wide training and learning by Oztimber has centred on developing an infrastructure that is enterprise based and owned, and consistent with the company's values and culture.

The company's training strategy

Oztimber has used the National Training Framework to fundamentally transform the way it approaches training in its workplace. In order to meet the demands of the organisation and all employees the company developed a vision with four principles that were thought to be essential.

The vision:	***To become a learning organisation.***
Innovative:	To attempt to embrace the NTF system (not just certain elements) as the response to the vision.
LLN inclusive:	To devise more creative strategies and practices, not necessarily follow models.
Unique:	Geographic isolation not viewed as a barrier to success for all levels and streams of activity on site.
Superior:	System owned by employees (responsible for budgeting, managing, monitoring, reviewing).

What advantages or implications does this vision have for EBATs?

How does this vision fit in with the broader goals of the organisation?

A number of the company's activities address specific aspects of the NTF. These include:

- Upskilling of existing employees to facilitate learning
- Designating the site Training Committee with the responsibility to manage, monitor and review all training
- Embracing work based learning
- Forming strong industry and provider partnerships to support learning activity
- Delivering and assessing competencies to national standards
- Developing customised assessment tools
- Developing a plan for leadership (benchmarked and aligned to FMI)
- Establishing a networking approach
- Establishing a mentoring system
- Developing ongoing cycles of goal clarification and
- Reviewing activities.

What pitfalls are there for organisations trying to bring about this kind of cultural change?

How might resistance among those who have low literacy and numeracy skills be exhibited?

Central to its rationale is the belief that this system will help all levels and all streams of activity on site to become more self-directed and better able to learn and develop in the future, while at the same time contributing to the implementation of the National Training Framework. Underpinning all training and

related activity has been a paradigm shift. Training has been seen as a tool for diagnosing a problem and trying to fix it. The new approach to training sees it developing methods to help people learn together and improve whole systems.

Strategies and initiatives used to achieve the goals

The first stage involved analysing the relevant competency standards against workplace tasks. The process involved appointment of a Training Advisor to:

This process used extensive consultation through committees. What other ways might be effective, especially for smaller enterprises?

- benchmark workplace tasks against the relevant standards
- develop a career path structure based on the standards for operators, supervisors and clerical administration staff
- develop employee career path handbooks for operators, management and clerical administration staff
- develop the learning support structure that would be required to implement and maintain the new training approach
- identify a structured, equitable and accessible learning program.

A number of structural changes were initiated to ensure maximum participation in the processes. The training sub-committee of the Enterprise Consultative Committee was given the responsibility to manage, monitor and review all the activity relating to analysing the competencies against the workplace tasks. The group was also responsible for the development of the written material and all training and assessment to ensure a structured, equitable and accessible program was achieved. The chairperson of the Training Committee was upskilled and released to assist the process and to help build ownership of the system across the site. Employees were involved in the design and development of content for the employee career path handbooks.

Can you identify with the role of the learning advisor / change agent?

Who could fulfil this role in your training and assessment environment?

It was important that the Learning Advisor understand both theory and practice in relation to the National Training Framework, the industry itself and LLN. This was because tests in the initial stages would determine participants' competencies within the framework. While the Learning advisor in some ways acted as a change agent, the role also involved drawing on the

internal strengths of the organisation and ensuring that broad ownership of the project was achieved.

Not only did this approach initiate a cultural shift within the local workplace, but it also helped the company review what it was achieving in terms of underpinning skill development. Several organisational and communication issues were addressed in the process. These included:

Speaking and listening skills	in different contexts for example between employer and employee, employee and manager or employee and the external environment
Questioning	asking questions in different environments, across different levels of activity
Responding	in alien environments (such as conferences)
Reading	learning to master jargon, interpret, analyse, customise to make relevant to own context
Writing	internal documents with co-employees needs in mind (career paths, training forms, assessment request forms), responding to letters, responding to applications, submissions
Numeracy	developing training budgets, monitoring the training budget (numbers, data), customising competencies and assessments (specific site standards for measurements and formula)
Documentation design principles	building in 'user friendly' language.

It sometimes takes time for change to be accepted by employees. How would an EBAT be able to determine whether employees were giving lip service to changes or whether the culture had been irrevocably changed?

LLN has been inclusive of all activity, not in theory but a committed practice. Other considerations have also been incorporated into the process to strengthen and support the approach, an obvious one being the principles of repetition, reinforcement, active participation, feedback, reward, relevancy and environment.

Initial assessment strategies

The initial assessment strategies ensured that clear structure and support mechanisms were in place. These included:

- provision of sufficient accredited trainers and assessors across the streams of activity
- development of a career path based on the relevant industry standards
- provision for existing employees to be assessed for recognition of current competence (RCC)
- designation of an employee as an Assessor Facilitator
- building a close working relationship with the Industry Training Board
- adoption and customisation of the National Sawmilling and Processing Assessment Tool to reflect specific workplace activity and standards
- implementation of an industry Skills Record Books for operator level employees
- setting up the recording requirements to direct results to the national ITAB to enable operator employees to receive the Skills Record Books (and national qualifications)
- development of strategic partnerships with preferred providers for other sectors of the business including clerical / administration, FMI, sales and marketing.

The need for these external links to industry might seem irrelevant to some employees. What mechanisms could be used to make this understandable to employees?

Is it possible that the level of internal and external consultation might hinder the process of literacy and numeracy delivery? If so, how?

Mechanisms for communicating the idea and process of workplace assessment to employees were also developed. This was a key element to successful implementation.

Preparing candidates for assessment

By using the initial assessment strategies employees understood that they would be supported through the process of RCC. They knew who to talk to about any issues or concerns. Time was allocated for employees who indicated interest in being assessed.

A number of factors were found to be critical at this stage.
1. Employees who expressed interest were contacted quickly to demonstrate commitment, organisation and support for their interest. 2. Designation of an assessment facilitator to be a role

model ensured that relevant checklists were customised and ready to be delivered. 3. Employees were not pressured to be assessed. Many wanted to "see how it went" with other employees first because of lack of confidence, scepticism or concerns that they might "fail". Once they saw that others were getting the Skills Records Books and consequently formal recognition, they were more likely to want to get involved.

Are there any others factors that would lead to a successful training program?

How does formal recognition enhance the success of a program?

Conducting assessments

Employees understood what assessment meant and they were prepared for assessments (refer to previous two sections). Assessments occurred regularly. Factors that were critical to the assessment process are described below.

Assessors were given time to prepare for assessments then released from their duties to conduct assessments. These were often done in blocks, that is - the Assessor was released for a whole shift to conduct assessments. The Production manager and stream Work Group Leader organised this to ensure a replacement was organised for production requirements. On occasions single assessments are also carried out.

The employees knew when they are being assessed and completed the checklist(s) to make sure they understood what was required. The Assessment facilitator, line supervisor or upskilled employee Learning Advisor was available to go through the checklist with the employee to help them if needed (e.g. to make sure they understood the wording by paraphrasing).

Who would be most suitable to manage this process in your environment?

The Assessors were supported so that they remained committed. The appointment of an Assessment Facilitator greatly reduced the potential for this to happen, as any issues such as accessing their assessees, was dealt with quickly and efficiently.

Employees were publicly acknowledged when they were confirmed as competent. This was done through formal presentation of Skills Record Books, local newspaper articles and articles in the company newsletter.

Conducting gap training

All training needs were submitted in writing to the Training Committee by an employee with the assistance of his/her

Workgroup Leader (on a Training Needs Form). The committee then assessed the need to ensure that:

- it aligned with the training plan
- it was budgeted for and
- it met the specified equity principles.

The 'What', 'Who' and 'How' are the critical factors of the training for Oztimber:

What are the trainers communicating?

The trainers must be able to use language that the learner will understand, particularly a new learner. Even workplace trainers fall into the trap of using jargon, or words that are alien to someone who has never worked in the industry before.

Who are the trainers training, new or existing employees?

There will need to be a different approach for each individual. The real challenge for the trainers is finding the right way for each learner to learn.

How are the trainers training?

The trainers must be able to identify the underpinning skills required to achieve the task, be it reading, writing, speaking, sign language (in high noise areas) and make sure it is inclusive in the training. There must also be mechanisms in place for trainers to get assistance if problems arise or are identified as being a barrier to learning. (Training Facilitator has been developing skills to assist employees or be able to refer or gain external assistance).

Language, literacy and numeracy support

Surveys of the state's Sawmill Industry 1995, and the state Forest Industries Training Board in 1996 revealed that over 30% of sawmill workers were not functionally literate. Oztimber started to address this issue before this level of concern was revealed.

The company, through WELL funding, commenced language, literacy and numeracy courses on site in 1992-93 and continued over a four-year period. Participation levels were high, with a variety of positive outcomes achieved.

During 2000 the company committed an employee representative to the Reference Group for a WELL funded, TAFE forestry project that was focused on developing literacy and numeracy resource for use in the forest industry. Oztimber's vision of becoming a learning organisation and its commitment to a structured approach to training and assessment offers employees opportunities to plan their work future. Proactive strategies, mechanisms and methodologies promote learning cycles, not isolated training. It is felt that this commitment will assist the business to build a competitive advantage in the often volatile market place. Integral to the approach is LLN support at all levels of activity (operator level to management level). Workplace LLN are no longer viewed as a simple set of skills, but an ability to use information in all different contexts within and external to the workplace.

What strategies do you use to support adult learning needs?

Outcomes

Oztimber is now building a training culture that is a shared responsibility. Improved business practices have also been integral in the success of the training structure and activities. For management the success has meant:

- the development of a sustainable structure
- provision of relevant and timely learning
- that the structure is embracing the National Training Framework whilst meeting the enterprise's requirements and local needs
- that the process is transferable and useful in a range of contexts
- the building of effective partnerships with training providers and its industry training body
- that the vision and model can work.

What aspects of an organisation's culture need to change in order for it to become more competitive? How does LLN fit in with these changes?

What strategies might Oztimber use in the future to address LLN in its operations?

For the employees it has meant:

- the acquisition of nationally recognised, portable skills and qualifications
- learning opportunities based on adult learning principles with an understanding of the work-based

- learning environment and employing different learning styles (to suit individual needs)
- empowerment
- more work based learning
- more access to learning opportunities
- more inclusive training
- a feeling of being valued
- new challenges in the workplace environment, including for a percentage of employees, new roles that are enhancing their work environment (trainers, assessors, mentors, coaches, facilitators, leaders)
- broader and clearer career opportunities
- increased confidence (in learning and work).

To what extent can inclusive LLN strategies be attributed to the success of Oztimber's programs?

The structure and system as outlined will provide employees with clearly defined learning options at every level / stream of activity on the site. Oztimber sees that its approach and outcomes to date is only the beginning of an exciting and challenging journey to achieve its vision.

Summary

How might Oztimber measure the success of its programs?

Oztimber saw the National Training Framework as a means to fundamentally transform the way it developed and / or recognised skills. It has been a significant mechanism for Oztimber being able to see training as a key instrument in improving competitiveness. Language, literacy and numeracy have been incorporated as an integral component in the training strategy.

It is believed that supporting this structured approach will assist the vision of becoming a learning organisation in that it

- places high value on training
- promotes the business as taking a leadership role in the industry as it overtly demonstrates that training should be seen as an investment, not simply a cost
- provides formal and informal training opportunities

- Encourages employees to be active learners and to demonstrate a personal contribution and commitment to their own education / training
- opens access and expands opportunities to learn (and be formally recognised for skills possessed)
- is responsive to the changing needs of the company and its employees
- establishes partnerships with the industry, providers and the community
- promotes accuracy in terms of the required standards of performance; and balance through the inclusion of the key competencies
- supports a sense of community obligation.

Oztimber has adopted this approach to training and assessment across all levels and all streams of activity on the site.

Numeracy and literacy and the Certificate of Agriculture

Julie Miller

Introduction

This case study provides an example of how numeracy and literacy needs are addressed through the Certificate of Agriculture for trainees / students in a school-based vocational education and training context.

Does "re-writing" the elements from a unit pose any problems?

Certificate of Agriculture competencies

The official written documentation of the Certificate of Agriculture is often difficult for the trainee or student to understand (refer to Sheet 1) and because of this, the elements have been re-written in a more accessible form. This is the first measure to address the level of literacy of students. The re-writing does not attempt to include all of the detail of the unit but rather to give the trainee an overall understanding of the unit (refer to Sheet 2).

Would it be preferable to contextualise the elements for the training and assessment environment of the student or trainee?

For example, the core unit 3.1.1 requires the trainee to be competent in identifying hazardous substances from the label and the applicable manufacturer's safety data sheet.

For this performance criterion, the student is required to access the Internet and find the Material Safety Data Sheets (MSDS) that are applicable to their own experience or to what they will or have used in the workplace (refer to Sheet 3). The trainee has to access a number of Internet sites. The aim of this exercise is to improve their technology skills and for them to extend their knowledge of the chemical industry.

How do Information Technology and the Internet affect delivery of LLN in Training Packages?

The information on these safety data sheets is very scientific and specific. Besides being able to find the data sheets the students are required to demonstrate an understanding of them. At this point, a formal lesson is conducted where the meaning and understanding of each section is examined. For many trainees the information given in MSDS is beyond their level of understanding (see for example Sheet 4).

...continues page 44

Sheet 1 – Example of documentation relating to elements of competency and performance criteria.

(RUAAGCORE3A) Use hazardous substances safely
Elements of Competency and Performance Criteria

National Code	Element Name
RUAAGCORE3A/01	**Handle hazardous substances**
	• Specific hazardous substance is identified from the label and applicable manufacturers safety data sheet. • Selected hazardous substance is handled in safe containers or packages under instruction from the supervisor or manager
RUAAGCORE3A/02	**Store hazardous substances**
	• Storage for hazardous substances is checked for compliance with industry standards in line with instructions. • Regular participation in the conduct of safety audits maximising the individuals awareness of safety issues. • Required hazardous substances are estimated and industry standard storage conditions established according to instructions.
RUAAGCORE3A/03	**Transport hazardous substances**
	• Transport mode and procedures are established in consultation with the manager or supervisor as instructed. • Hazardous substances are loaded or decanted into secure containers or packaging in line with work programs. • Load is secured or sealed to ensure safety and eliminate spillage according to enterprise policy. • Transport of hazardous substances is completed in line with established procedures, and movements recorded according to enterprise policy.
RUAAGCORE3A/04	**Use hazardous substances**
	• Personal protective equipment suited to the task is selected and fitted or worn. • Selected hazardous substance is removed from storage and used in accordance with the label instructions or workplace requirements. • Containers and unused hazardous substances are disposed of in accordance with established workplace procedures.
RUAAGCORE3A/05	**Act in emergency situations with hazardous substances**
	• Emergency incidence is notified to appropriate authorities in the workplace. • Clear identification of the nature of the emergency is established in consultation with the workplace supervisor. • Direction is sought from the supervisor or workplace notices to establish the role of the individual in the emergency.

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Sheet 2 – Rewritten AGCORE competencies

RUA AGCORE 3A - Use hazardous substances safely

Element 1 Handle hazardous substances

This competency could be demonstrated by:

- identify hazardous substances and use MSDSs
- handle hazardous substances safely

Element 2 Store hazardous substances

This competency could be demonstrated by:

- correct storage of hazardous substances
- conduct safety audits
- accurate estimate of required hazardous substances

Element 3 Transport hazardous substances

This competency could be demonstrated by:

- transport is according to instructions
- hazardous substances are loaded or decanted into secured containers
- load is secured or sealed to eliminate spillage
- transports hazardous substances

Element 4 Use hazardous substances

This competency could be demonstrated by:

- PPE is worn as needed
- hazardous substances are used as directed
- containers are disposed of safety

Element 5 Act in emergency situations with hazardous substances

This competency could be demonstrated by:

- emergency incidences are notified
- clear identification of emergency is given to supervisors
- directions is received on procedures for an emergency

Sheet 3 – Internet sites used for accessing information about chemicals

The following nine Internet addresses are interesting in regard to the use of chemicals.

1. http://www.msds.com.au
2. http://www.aventis.com.au
3. http://www.monsantos.com.au
4. http://www.weeds.tassie.net.au
5. http://www.agsafe.com.au
6. http://www.pestgenie.com.au
7. http://www.dpiwe.tas.gov.au
8. http://www.environment.gov.au
9. http://www.avcare.org.au

What type of information is found at each site?

Print off one example of the information, especially looking at chemical information.

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Sheet 4 – Extract from an MSDS

ROUNDUP® BIACTIVE™ Herbicide

Statement of Hazardous Nature
Not classified as hazardous according to criteria of Worksafe Australia

Identification

Product Name ROUNDUP® BIACTIVE™ Herbicide

Issued	8/1/2000	**Supersedes**	22/4/1997	**MSDS No.**	260
UN No		**Hazardous**	No	**Hazchem**	N/A
DG Class	N/A	**Poison Schedule**	S5	**Prod. Code**	
Sub Risk	N/A	**Packing Group**	N/A		

Other Names

Uses Herbicide. NOT FOR REFORMULATION OR REPACKING.

Physical Description/Properties
Appearance and Odour: Green coloured solution, earthy.

Specific Gravity: 1.17

Boiling Point (C): N/A
Melting Point (C): N/A
Vapour Pressure: N/A
Vapour Density: N/A
Evaporation Rate: N/A
Percent Volatiles: N/A
Solubility (Water): Soluble
pH (1% solution in water): 4.6 Bulk Density: N/A

FIRE/EXPLOSION HAZARD

Flash Point (C): >90 TCC
Autoignition (C):
LEL:
UEL:

Ingredients

Chemical	CAS No.	Proportion
GLYPHOSATE ISOPROPYLAMINE SALT	38641-94-0	41% approx
SURFACTANT		10 - 20%
WATER		Balance

All the constituents of this material are listed on the Australian. Inventory of Chemical Substances (AICS).

Demonstrating competencies

What other strategies could be used to assist the student / trainee read a chemical label, particularly one with low levels of LLN skills?

Trainees are required to complete a worksheet to assist them in improving their reading of manufacturer's labels (see Sheet 2). They are given a copy of a chemical label (see Sheet 5) and there is a comprehension exercise associated (refer to Sheet 6).

In performance criteria 3.4.2, (see Sheet 1) the trainee is required to use a hazardous substance. To use hazardous substances safely, the trainee has to conduct numeracy calculations. Using coloured water, the trainee uses a knapsack sprayer to spray a rectangular area. The trainee is then shown how to calculate the area sprayed and then practise their area calculations. Once the area is known, the volume per area can be calculated. Initially, just the simple task of reading the knapsack sprayer and calculating how much has been used (subtraction) can be challenging for some trainees. This practise spraying also gives them confidence to use industrial equipment accurately especially when it is combined with the wearing of personal protective equipment.

Are there other methods that could be employed to check the student / trainee understanding of these tasks?

Back in the classroom, the trainee is given sheets taken from the Farmers Chemical Accreditation Course. The content of these sheets is then explained to extend their knowledge in chemical calculations (see Sheet 7). To check their understanding, a sheet on chemical calculations is given. (refer to Sheet 8).

Given the technical nature of language used in MSDSs and labels might it not be better to 'bolt on' literacy skills so that students who have low LLN skills have the prerequisite skills and knowledge? If not, why not?

There are other performance criteria which also add to the development of trainee literacy and numeracy skills. For the performance criteria 3.2.1, involving conducting a safety audit, the trainees / students work together to develop the audit document and then work together to conduct the audit. Cooperative learning is developed by the use of this teaching style. Responses to emergencies (performance criteria 3.5.1) is developed by the trainees being involved in scenarios and working in role-playing. This also assists in the development of their communication skills contained in core unit 4. For the attached sheets, the responses can be verbal or written depending on the trainee's preferred response style.

...continued page 51

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Sheet 5 – Chemical label used for comprehension exercise

Hoegrass®

POISON

NOT TO BE TAKEN

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING

Hoegrass®

Selective Herbicide

ACTIVE CONSTITUENT: 375g/L DICLOFOP-METHYL
SOLVENT: 534 g/L HYDROCARBON LIQUID

For the post-emergent control of annual ryegrass, common barbgrass and wild oats in wheat, linseed, peas and other crops as listed in Directions of Use table, and Crowsfoot grass (Eleusine indica) in turf species

AgrEv

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Sheet 6 - VET Agriculture / Horticulture - Reading labels

For Hoegrass

1. What is the schedule rating?

2. What is the active ingredient?

3. What PPE should be worn when mixing this product?

4. What is the first aid if swallowed?

5. What is the application rate for wild oat control in poppies in Tasmania?

6. What is the application rate for common barbgrass control in peas in Tasmania?

7. What is the withholding period?

Sheet 7 – Information sheet

EQUIPMENT CALIBRATION
Hand Held

Determination of Flow Rate

For hydraulic nozzles first make sure the equipment is operating at the recommended working pressure. Then measure the output into a container over a timed period of 1 minute. Repeat this process five times to find an average output per minute. Record the operating pressure and nozzle details.

To calibrate CDA and air shear units, use the same calibration process. Flow rate is usually determined by gravity. To measure the flow rate the supply tube to the disc or air channel must be disconnected to allow it to flow into a measuring container. It is important that the chemical tank and the supply tube are in a field operating position when making the flow measurement.

Determination of Swath Width

The procedure for hydraulic equipment and CDA units is straight forward. Operating at normal-working pressure and the same height above the ground, as it would be above the target to be sprayed, spray over some dry soil or cement. The width covered is then visible and can be measured. Some CDA units produce small droplets which may be difficult to see and in these cases a water sensitive paper can be used to make the spray pattern visible.

Determination of Distance travelled

Walk at your normal pace for 1 minute and measure the distance covered. You should cover 60 metres in 1 minute. (This is a comfortable walking speed)

Calibration Calculation

Before starting always check:

- All components of the spray unit are clean and in working order, and
- Check that operational pressure, rotational speed, distance from target and nozzle selection, are correct for the task at hand.

The basic steps are:

STEP 1: Determine output delivered in a given time (A)

STEP 2: Determine the area covered in that given time in order to calculate (B)

STEP 3: Output per area applied by the equipment (C)

STEP 1: OUTPUT

The flow rate of the sprayer is measured five times and averaged.

Output in litres per minute.

Reading No.	1
	2
	3
	4
	5
Total	_____ L
Output per minute	= Total ÷ 5 (readings)
Output	= **(A)** (Litres/min)

STEP 2: AREA

(i) Determine distance in metres covered in 1 minute at the normal constant operating speed.

= _____m

(ii) Measure the swath width in metres

=_____. m

Area sprayed in 1 minute **(B)**

(B): distance covered (m) x swath width (m)

= (i)_____ x (ii)_____

(B) = _____(m^2)

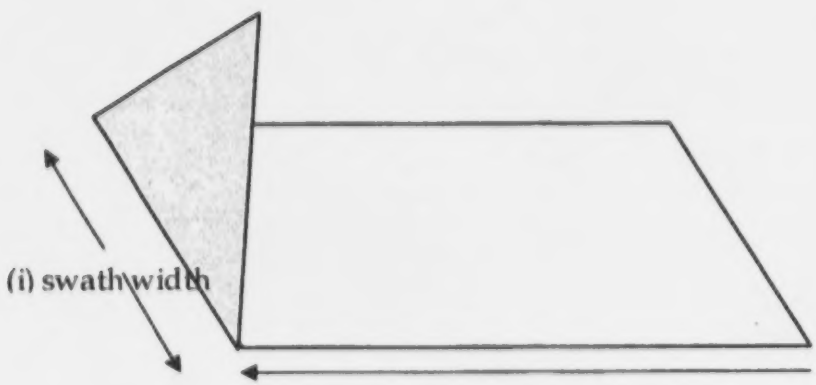
STEP 3: OUTPUT AREA (C)

To calculate Output/ Area

Divide **(A)** - litres per minute

By **(B)** - area in m^2 covered per minute **(A) ÷(B)= (C)**

(C) X 10,000 =_____(Litres/hectare)
(1 hectare 10,000 square metres)



Sheet 8 – Checking understanding: chemical usage

VET Agriculture / Horticulture

Chemical Usage

1. The output from a sprayer was measured as follows

   Width of spray 12m, Total Output 22.6 L/min
   Distance covered in 1 minute 112m

   a) What area is sprayed in 1 minute?

   b) What is the output in L/Ha? (Output 1 - area x 10000)

   c) If the chemical is applied at 3L/Ha and the tank holds 600L, how much chemicals should be added to a full tank? (Amount to add = Tank capacity x label)

   Output

   d) If the tank holds 500L and chemical is applied at 2L/Ha how much chemical should be added?

2. The output from a sprayer was measured as followed

   Width of spray 15m, Total output 25L/min
   Distance covered in 1 minute 150m

   a) What area is sprayed in 1 minute?

   b) What is the output in L/Ha?

   c) If the chemical is, -applied at 4L/Ha and the tank holds 500L, how much chemical should be added to a full tank?

   d) If the tank holds 5001 and the chemical is applied at 3L/Ha how much chemical should be added?

3. The output from a sprayer was measured as follows

   Width of spray 2m, Total output 0.5 L/min
   Distance covered in 1 minute 5m

   a) What is the area sprayed in 1 minute?

   b) What is the output in L/Ha?

   c) If the chemical is applied at 4L/Ha and the tank holds 151, how much chemical should be added to a full tank?

   d) If the tank hold 151 and the chemical is applied at 3L/Ha, how much chemical should be added?

Self assessment

Before assessment, the trainee completes a self assessment sheet (refer to Sheet 9). While there is only a final rating of 'competent' and 'not competent' in terms of assessment, the varying levels of competency is used as this gives a better indication to the trainee and teacher of their level of competency.

What other purpose may Sheet 9 have? Should these arbitrary ratings be described as levels of competence?

Final assessment

As the Education Department does not permit the use of hazardous substances, the assessment is conducted using a simulated hazardous substance. The assessment is done at an holistic level where a simulated chemical application is undertaken.

Does simulation of chemical use detract from assessment?

The trainee is required to actually handle and use hazardous substances. The trainee has to calculate the required amount of chemical, how it is diluted and the rate at which the chemical is applied to a surface. Use of personal protective equipment is assessed at the same time. A check sheet is used for assessment purposes (refer to Sheet 11).

Conclusions

This case study has demonstrated some practical ways that literacy and numeracy requirements can be integrated into a Training Package to achieve the required competencies. The case study has also demonstrated what can be achieved when literacy and numeracy needs are taken into consideration. It illustrates this by providing several examples where competencies, which do not directly specify literacy and numeracy outcomes, are demonstrated with a 'built in' approach to literacy and numeracy.

Sheet 9 – Self assessment

RUA AGCORE 3A - Use hazardous substances safely

Tick the boxes to indicate how confident you are in undertaking the following operations with only limited instructions and supervision.

	Not confident	Slightly confident	Confident	Very confident
Handle hazardous substances • identify hazardous substances and use MSDAs • handle hazardous substances safely				
Store hazardous substances • correct storage of hazardous substances • conduct safety audits • accurate estimate of required hazardous substances				
Transport hazardous substances • transport is according to instructions • hazardous substances are loaded or decanted into secured containers • load is secured or sealed to eliminate spillage • transports hazardous substances				
Use hazardous substances • ppe is worn as needed • hazardous substances are used as directed • containers are disposed of safely				
Act in emergency situations with hazardous substances • emergency incidences are notified • clear identification of emergency is given to supervisor • directions is received on procedures for an emergency				

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Sheet 10 -Partial assessment grid

RUA AGCORE 3A - Use hazardous substances safely Trainee/ student will be assessed while carrying out a stimulated handling of a hazardous substance. They will have available all PPE gear, stimulated hazardous substance, decanting equipment etc. Performance Criteria being assessed include 3.1.1, 3.1.2, 3.4.1, 3.4.2, and 3.4.3 A tick will indicate that the candidate is competent.							
Trainee / student name							
Find the MSDS sheet for the hazardous substances being used.							
Answer questions from MSDS sheet							
Read hazardous substance label accurately							
Calculate dilution accuracy							
Wear PPE gear correctly							
Handle hazardous chemical safely							
Maintain cleanness of site							
Mix chemicals accurately							
Use hazardous chemical safely							
Dispose of excess hazardous substances safely							
Clean up							
Date							
Assessed by							

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Integrating LLN with a Training Package: an alternative approach

Sally Mitchell

Introduction

This case study shows how a literacy and numeracy program, advertised as such, can be successfully integrated into a workplace using a Training Package. The course was designed to both satisfy the requirements of the Training Package and improve workplace performance.

How might a LLN program like this directly improve workplace performance?

Introducing literacy and numeracy to a workplace

Programs to implement Training Packages can be conducted in different ways to suit the needs of employees and employers. The method used to implement the Community Services (Aged Care Work) Training Package at St Steven's Home, using WELL funding, was quite different.

The program was advertised as 'Workplace Literacy' in an attempt to demystify the use of the word literacy, and was run as a course of 6 x 4 hour sessions (see Sheet 12).

At the end of the course participants were credited with the units:

CHCORG1A	Follow the organisation's policies, procedures and programs.
CHCORG2A	Work with others
CHCADMIN1A	Undertake basic administrative duties
CHCCOM1A	Communicate with people accessing the services of the organisation

Why might employees be inhibited from attending a workplace literacy program advertised as such?

Although the process in this work place was conducted as a 'course' there remained a lot of scope for responding to the needs of the group and still cover the performance criteria, and course objectives as advertised. In addition explaining to participants in detail about the Training Package and the process of RCC gave a number of them (particularly those with no formal training or qualifications) a lot of confidence to take part.

Sheet 12 – Advertising flyer

WORKPLACE LITERAC

Are you interested in attending a training program on workplace literacy?

The program will cover the following areas:

Filling out Workplace forms:

- What forms do and why?
- Writing what I need to write

* For those participants experiencing difficulty with spelling an opportunity will be made available for you to work on this in either small groups or one to one with the facilitator.

Applying for a job:

- Researching the job
- Writing the letter
- Writing your application
- Dealing with interviews

Working with others:

- Dealing with stress
- Being more assertive
- Managing time at work
- Working in teams
- Dealing with workplace harassment

Customer service:

- Telephone skills
- Dealing with complaints
- Working with customers

Quality improvement:

- Standards
- Accreditation

Dates and times will be sorted out once interest in the course has been determined.

Enrolment in this course will provide you with an opportunity to have some units of the TAFE Community Services Course accredited.

Aimed to commence 17th April

Inquiries or enrolment to ADON by phoning or calling into ADON office after 4pm on a weekday.

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Satisfying performance criteria using workplace examples

One issue that arose with the second group going through this process was notification to staff of the death of a resident. Informal group discussion during the sessions indicated that all participants had been upset at the recent death of a popular resident of the nursing home. Due to shift arrangements a couple of participants had not found out about his death until several days later and one had read of it in the personal announcements of the local paper.

How might a workplace program like this be expected to help an employee in other areas of their life?

Although staff are meant to be notified in the 'Communication Book' at work not all staff have time to read it at the start of a shift and it may not be a current notice if they have several days off due to shift roster arrangements.

A discussion was held to work out what participants felt would be the best way to ensure staff could be notified and an 'Improvement Log' was completed and submitted for consideration (see Sheet 13).

Conclusions

This simple activity covered a number of performance criteria in the units being assessed including: communicating with others about work matters, following organisational guidelines and reporting procedures , fulfilled a number of course objectives including: filling out workplace forms, being more assertive, working in teams and improving quality, and personal needs of the participants were catered for.

Sheet 13 – Workplace improvement log

St Steven's Home for the Aged IMPROVEMENT LOG			
AREA:		**TO BE COMPLETED BY ALL PERSONNEL**	
No.	This form is designed to identify **problems** with the facility and to make **suggestions** to improve it. This form can apply **to Supplier, Management System problems or Customer complaints**		
	On this side: • Log numbers are sequential from 01 from each area • Describe the "**problem**" (actual or potential) or make a "**suggestion**" to improve the system	On this side: • For problems, detail immediate actions taken by yourself • For suggestions, the HOD is to detail actions taken • When the action is complete tick "Closed Out" box	
	DETAILS	**ACTION**	
Logged by: (Print Name) Date:		CIR No. N/R [ ] Supplier [ ] Resident / Relative [ ] Staff [ ]	
	Problem [ ] Suggestion [ ]		
		$ Cost_____	Closed Out [ ]
Logged by: (Print Name) Date:		CIR No. N/R [ ] Supplier [ ] Resident / Relative [ ] Staff [ ]	
	Problem [ ] Suggestion [ ]		
		$ Cost_____	Closed Out [ ]
Logged by: (Print Name) Date:		CIR No. N/R [ ] Supplier [ ] Resident / Relative [ ] Staff [ ]	
CIR= Continuous Improvement Report N/R= IR Not Required			

Part 3 Delivery options

Part 3 includes four case studies that provide useful examples of ways that literacy and numeracy can be included in delivery options that meet the needs of the enterprise, employees and satisfy the requirements of the Training Package.

Sally Mitchell provides examples of ways that one organisation has addressed literacy and numeracy issues for its employees and outlines processes used in the development and implementation of the program.

Vanessa Lynne shows how literacy and numeracy programs can be adapted to meet the special needs of migrants in a factory environment and how as a result of successful implantation of a program, the training culture of the workplace changed.

Susan Bates discusses the outcomes of the CAVSS program in Western Australia and shows how complimentary skills of literacy specialists and industry trainers can be used for better training outcomes.

Bruce Milne provides an example of how training packages can be used as a vehicle to achieve many enterprise goals using an example from the food processing industry.

Identifying enterprise goals and delivering needs

Sally Mitchell

Introduction

This case study provides examples of ways that one state-wide organisation has addressed literacy and numeracy issues for its employees. It outlines processes used in the development and implementation of the program.

Background

Stateside Wholesalers Limited is responsible for warehousing and supply of grocery, frozen and chilled lines and general merchandise to 300 stores throughout the state in which it operates.

What are some ways that outcomes could be measured?

The first round of Workplace English Language and Literacy (WELL) funding received by the company, for 220 hours, was used to carry out individual skills audits and some training in small groups and with individuals who were permanent employees in the warehouse. The training addressed specific personal needs in literacy, numeracy and general communication. Outcomes from the first round of funding were hard to quantify and it was decided that the second round, of 160 hours, should be used to assess individuals against Certificate I and Certificate II in Transport and Distribution (Warehousing) units, from the Transport and Distribution training package. Training and support would also be provided where needed for individuals whose LLN skills might hinder their attainment of units.

What motives would the organisation have in pursuing the second round?

Rather than initially provide training, it was felt that recognition of current competence and provision of training to fill gaps in individuals' knowledge and skills would more directly help the employees and give clear outcomes to management who may not see the value of prolonged training courses.

Analysis of competency standards against workplace tasks

The initial stage of the program was taken up with developing and customising an assessment tool that could be used in the warehouse to assess individuals without taking them off the job for a long period of time. This was undertaken in conjunction with the Distribution Centre training officer and using expertise from other areas of the warehouse to fill gaps in assessors' technical knowledge.

A checklist was developed that could be used while directly observing an employee doing their job. Additional questioning and case study exercises were built in to ensure all performance criteria were covered for the majority of employees. Further customisation was undertaken to cover those employees with a slightly different range of jobs and skills.

Analysis of two of the assessed units provides some examples of how the performance criteria were related to workplace tasks and how LLN issues were addressed at the same time.

The first unit analysed was TDT E5 *Carry out Workplace Calculations*. The assessment checklist is shown in Table 1.

Table 1 - Unit of Competence E5 Carry out Workplace Calculations

Performance outcomes	Method to gather evidence	C/NS/ NYC
Carry out calculations Prepare estimates Interpret graphical representations of mathematical information.	**Demonstration and questioning** 1. Order picked observing/asking: Multiple Pick where there is not enough stock processed correctly or **Demonstration exercise** 2. Explain how you find out about your job performance and how you interpret this. 3. Question on multiplying layers on pallets *or* 4. For *Inwards* personnel correctly carrying out receipt of goods – see Unit A13	

The evidence used for most employees was:

Point 1 – the demonstration exercise (See Evidence point 1 and Figure 5)

Point 2 – interpretation of an Order Picker Performance Report (see Evidence point 2 and Figure 6)

Point 3 - observing the assessee (see Evidence Point 3)

Evidence point 1

Looking at the demonstration exercise in Figure 5 we can see that this involves the obvious calculation of subtracting 12 from 15 as well as reading and writing skills. The amount and information regarding the product must be read from the labels used and the number 3 written correctly onto the scratch label. In this way an activity has been developed which uses an example both familiar to the employee and relevant to activities in the workplace.

Figure 5 – Demonstration exercise

E5 Carry out Workplace Calculations
Demonstration Exercise

Only 12 packs of wooden blocks are in the pick slot when you come to pick the order below. Fill out the scratch label.

The correct answer would be to write 3 here.

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Figure 6 - Evidence point 2

STATEWIDE INDEPENDENT WHOLESALERS LIMITED

TO BE COMPLETED EACH PERIOD FOR PICKERS WHOSE PERFORMANCE HAS DROPPED BELOW AVERAGE THIS PERIOD BY 5% OR MORE

Average for period: 115

Standard average: 110

SHIFT PERFORMANCE REPORT PERIOD:										
AVERAGE FOR PERIOD			PERFORMANCE REPORT DETAILS (Please indicate the % achieved each week)					FOLLOW UP		
Surname	Given Name	Ctns per hour	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Reason for unsatisfactory performance	Per. Review form completed?	Action verbal, written
Smith	Peter	126	118	124	114	148				
Stone	John	118	18	119	120	115				
Young	Sharon	101	93	103	108	101				

Shift Manager's Authorisation: _____

Date: ___/___/___

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Evidence point 2

To find out about job performance an employee would refer to the table shown which was displayed near the shipping office in the warehouse. It details the pick rate of each order picker, which should be about 110 cartons per hour with allowances made for the type of order being picked. Each assessee was asked how they would determine the "Average for Period" results. Again this is using an example from the experiences of the employee.

Is there a case for developing assessment tools that use examples form outside the workplace?

Evidence Point 3

This activity relates to cycle counts which are carried out regularly in the warehouse as a form of stocktaking. Each employee on the cycle count would have a number of 'pick slots' in which the stock is to be counted. This would be a lengthy task if cartons were counted individually. The majority of employees determine the number of cartons in a layer and then multiply this by the number of layers, adding or subtracting extra or missing cartons as appropriate. Once again this is a familiar activity for employees and any problems individuals might have can be addressed as they arise.

Do these evidence points ensure that trainees are competent with underpinning LLN skills?

The second unit that problems arose with was TDT F1 Follow Occupational Health and Safety Procedures. The checklist for this unit is shown in Table 2.

Table 2 - Unit of Competence F1 Follow Occupational Health and Safety Procedures

Performance Outcome	Method to gather evidence	C/NS/ NYC
Identify and follow workplace procedure for hazard identification and risk control. Contribute to arrangements for the management of Occupational Health and Safety Complete Occupational Health and Safety records	**Oral questioning and demonstration. Examples include:** 1. What would you do if a box of bottles was dropped and two bottles broke? 2. Fill out Damaged Stock Report Sheet. 3. Where are hazardous items stored in the warehouse? 4. Describe what you would do if the fire alarm were to go off now. 5. What are the footwear requirements of the workplace? 6. Explain company policy with respect to smoking. 7. You cut yourself while cleaning up the broken bottles. Who do you report to? 8. Fill out an Accident and Injury Report form, identify company first aid officers.	

In this case filling out forms that are familiar and relevant to the workplace provide information about the LLN skills of the employee being assessed.

Prepare candidates for assessment

What should be done when it is clear that employees need skills but don't volunteer?

Information meetings for both day and afternoon shift employees were held and expressions of interest from those people wishing to participate were called for. Those employees taking part were interviewed individually before their assessment. The interview took 20 - 30 minutes and included: working out an individual assessment plan with an explanation of competency standards, discussions on the units being assessed for each person, the qualifications they would be attaining, the assessment procedure and what to expect on the assessment day and confidentiality and security of information issues. Information sheets (see Sheet 14, Sheet 15 and Sheet 16) were given to each participant.

Sheet 14 – Assessment plan

Individual Assessment Plan

This plan will help us ensure that your assessment recognises the skills you have, fairly and accurately.

The checklist below will be used to tick off the topics you and the assessor/ s discuss.

- ☐ The assessment procedure.
- ☐ Confidentiality and security of information.
- ☐ Explanation of what you will be assessed against. (Competency standards).
- ☐ Qualifications and "Statement of Attainment'.
- ☐ Description of what to expect on the assessment day.

What to bring on assessment day:

_____

_____

_____

_____

_____

I have discussed details of my assessment with the assessor/ s and have had all the above explained to me, to my satisfaction.

Applicant: _____ Assessor: _____ No:

Signature: _____ Signature: _____

Date:_____

Estimated date of assessment: _____

Sheet 15 – Introductory letter

Thanks and congratulations for participating in the assessment process to attain a Certificate I in Transport and Distribution (Warehousing). The assessment will be carried out as much as possible as part of your normal daily routine with the addition of some exercises and questions. The exercises and questions aren't designed to trick or confuse you, but to help the assessor to decide whether or not you understand the job you are doing and why you are doing it in a particular way. They will also give you the chance to demonstrate your knowledge in areas that may not come up each day as part of your work routine.

Most questions will give you the chance to tell the assessor what and why you are doing a task in as much detail as you think is necessary. For example:

Tell me about how you stack a *pallet*.

When would you do this differently?.....

What would you do if ..... ?

Tell me about what happens next

What are the safety issues you need to keep in mind when doing this job?

Most of the activities will be finding out about:

- the job and the procedures you are following
- your background knowledge of why you are doing the job the way you are,
- your knowledge and understanding of relevant regulations
- how you deal with problems that come up
- how you would respond in situations that rarely occur, such as equipment failure
- safety issues

You will be informed of the outcome as soon as possible after the assessment. If you disagree with any decisions the assessor will be happy to discuss it with you and arrange for further training or reassessment as appropriate. Appeals to the decision may be lodged if you feel the assessment was not fair, valid, reliable or flexible.

Sheet 16 – Explanation of mathematical terms

GLOSSARY OF MATHEMATICAL TERMS

+	add, total, sum of, addition, plus
-	subtract, takeaway, take, difference between, minus, subtraction, take from
÷	division, divide, share, long division, into
×	multiply, product of, of, by, times
Estimate	make a good guess
Evaluate or **Calculate**	find the answer
Average	add the numbers together and divide by the number of numbers Example: 12 + 24 + 30 = 66, Divide by 3 = 22.

Conduct gap training

While assessing Unit E5 – 'Carry out workplace calculations' an employee who did not know how to work out averages was discovered. Because of the way the assessments were being conducted it was possible to work with the employee after the initial assessment, to ensure he could consistently do this calculation and reassess him as competent. A copy of the type of work sheets used for this is shown in Sheet 17.

What sort of changes could be made to the 'Division revision' sheet to make it more relevant to the workplace?

Conduct LLN Support

While assessing Unit F1 – 'Follow Occupational Health and Safety procedures' many individuals had problems filling out the Accident and Injury Report Form. This problem was wide spread and occurred with individuals who had no other LLN problems. This was identified as a fault in the design of the form (see Figure 7) and as part of the project suggestions were made to produce a new form (see Figure 8). The new form was trialled and adopted.

Conclusion

This case study has provided some useful examples of ways that a WELL program can be designed and implemented in a workplace. It demonstrates that literacy and numeracy training can use existing workplace material in the preparation and implementation phases of the program. It has also shown how a program can be used to improve workplace systems and procedures and to make them more user friendly for those with literacy and numeracy difficulties.

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Sheet 17

Division Revision

1. $18 \div 3$
2. $35 \div 7$
3. $56 \div 8$
4. Divide 42 by 6,
5. How many twelves in 60?
6. Divide 48 by 6
7. What is each share, if 66 is divided into 6 equal shares?
8. $5\overline{)2695}$
9. $7\overline{)5348}$
10. $8\overline{)3570}$
11. $4\overline{)2009}$
12. Average: 26, 49, and 33
13. 1-3. Find the average of 168, 213, 24 and 75.
14. If 7 pizzas cost $38.50, how much does each pizza cost?
15. If 235 people need- to- be transported in five buses, how many people per bus?
16. Fred's pick rate for this month has been

    101 for the first week

    115 for the second week

    89 for the third week

    112 for the fourth week

What is his- average for the month and would he need counselling?

Figure 7 – Incident reporting and investigation report before design changes

INJURED PERSON INVESTIGATION REPORT

Incident ☐ Injury ☐ Disease ☐

Personal details of the injured person

Surname

Given names

Sex (M or F)

Date of birth

Basis of employment day of incident / injury or disease

Starting time: am ☐ pm ☐

Shift
1. Fixed, standard hours ☐
2. Afternoon shift ☐
3. Casual ☐
4. Contractor ☐

Job details

Description of occupation or job title

Main tasks performed

Date incident / injury or disease occurred

Time of occurrence am ☐ pm ☐

Nature of incident / injury or disease

Bodily location of injury or disease

13. Where did the incident / injury or disease occur? *(In which part of the workplace did the injury occur?)*

- What were you doing at the time of the incident / injury or disease occurrence? *(eg: removing laundry from laundry basket)*.

- How exactly was the incident / injury or disease sustained? *(Include the name of any particular chemical, product, process or equipment involved.)*

14. Indicate with a circle ○ body location of injury or illness.

1. Eye
2. Ear
3. Face
4. Head (other than eye, ear face)
5. Neck
6. Back
7. Trunk (other than back and excluding internal organs)
8. Shoulders and arms
9. Hands and fingers
10. Hips and legs
11. Feet and toes
12. Internal organs (located in the trunk)
98. Multiple locations (more than one of the above)
99. General and unspecified locations

Tick each box to indicate injury or illness.

1	☐	8	☐
2	☐	9	☐
3	☐	10	☐
4	☐	11	☐
5	☐	12	☐
6	☐	98	☐
7	☐	99	☐

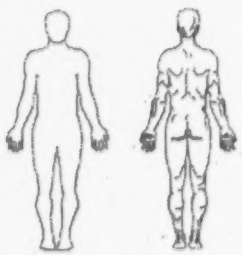

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Figure 8 – Incident reporting and investigation report after design changes

STATEWIDE INDEPENDENT WHOLESALERS LIMITED

ACCIDENT REPORT FORM

- Date of this report -

/ /

INCIDENT ☐ INJURY ☐ ILLNESS ☐

WHO.. 1. Was Injured?_____ (Name in Full)

2. Were Witnesses?_____

_____

3. Was Supervisor?_____

Starting time:_____ AM/PM. (Of Injured Person)

Basis of Employment - (Of Injured Person)

1. Fixed, Standard Hours	☐	2. Afternoon Shift	☐
3. Morning Shift	☐	4. Casual	☐
5. Traineeship	☐	6. Contractor/Visitor	☐

Occupation or job title: _____

WHEN..

Did accident/injury occur?____/____/____ (Date) & _____ (Time) AM/PM

WHERE..

Did accident/injury occur?_____ (Warehouse or Office) _____ (Section/Department)

WHAT..

Type of Injury occurred - (Please tick box to indicate)

Strain/Sprain	☐	Fracture	☐
Cut/Laceration	☐	Bruising	☐
Scratch/Abrasion	☐	Burn/Scald	☐
Amputation	☐	Internal	☐
Dislocation	☐	Foreign Body	☐
Chemical Reaction	☐		

Other:_____

_____

_____

Please tick box indicating body location of accident/injury or illness.

Eye	☐	Ear	☐	Shoulders & Arms	☐
Face	☐	Back	☐	Hands & fingers	☐
Hips & legs	☐	Neck	☐	Feet & Toes	☐
Head (Other than eye/ear or face)	☐			Back	☐

Trunk (Other than back & excluding internal organs) ☐

Internal Organs (Located in the trunk) ☐

Multiple locations (More than one of the above) ☐

General & unspecified locations ☐

(1 of 2)

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Too many words: training in a factory environment

Vanessa Lynne

The project: special needs of NESB workers

Too many words! As managers and trainers we just can't resist them. The higher we climb up the organisational ladder, the more words we seem to be compelled to use. There's an epidemic of people using far too many words and to what effect?

With funding from the Workplace English Language and Literacy (WELL) Program, a two-year project has addressed the special needs of NESB workers. In addition, it has also worked to change the culture of training for the whole organisation so that more information is retained and the results of training are tangible rather than just assumed.

Traditionally, training is measured in the number of hours people attend courses. An organisation can broadcast its commitment to training by claiming it has spent so many dollars on so many hours of training. But as educators, we know that attendance does not equal comprehension. Nor does training necessarily guarantee competence. This is especially true when half the participants are NESB and a fair proportion of the rest has an inbuilt resistance to anything resembling their schooling experience.

Process

At the beginning of the project, each of the 250 workers was interviewed. The training had to be sold to them very early if the rest of the project was to succeed. Word travels fast in a factory. If something is not acceptable to one group, the rest will soon hear about it.

What constraints are there to this method of delivery?

Fortunately the training planned for the first year tied into the industry training package and the future participants were easily sold on the idea that any training they attended would give them credit towards their certificate. For some that had given up on education entirely, the thought of getting a qualification just for going to training they normally go to was a great incentive.

What should be done with those who don't buy the argument of doing training of credit?

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The first year went very well with good attendance at all the sessions and very positive feedback. The communication and team building units were delivered and interesting issues were raised during lengthy discussions. Issues such as cultural diversity were debated energetically with the English speakers gaining useful insights about the difficulties facing their NESB counterparts on a day-to-day basis.

Would this approach work in your training / assessment environment?

The training groups consisted of mixed races on the whole. However, a small number needing special English intervention met with a literacy teacher to assist them. Initially there were eight NESB groups, but as they progressed with the literacy teacher they joined the mainstream groups. Half way through the year both trainers and management acknowledged that a small group would never make the transition. They continued to meet over a year later.

What considerations may need to be taken into account when choosing suitable workplace assessors?

Towards the end of the year the next phase of the project was considered. It was always the intention to get the workers through as much of the certificate as possible by assessing them on the job. Just how to do this needed some thought. In the end it was decided to train the workers to be assessors.

The selection of the assessors was made easier because of their involvement in the communication skills training. "Talent" was identified by the trainers and confirmed by their supervisors. As they were being asked to train to Certificate IV standard, their talent needed also to be backed by commitment. Of the ten assessors trained, two were from a non-English speaking background. All excelled in the training and undertook their assessing duties with enthusiasm. Thus the problem of how to assess on the job was solved. That left the rest of the training to be addressed.

What other impacts may this from of delivery have?

The communication skills training was brought into the organisation via the trainers placed in the industry by TAFE. The other core-module training such as occupational health and safety and food safety were delivered by in-house trainers often using materials designed by people in the Eastern state branches of the company. While the materials were judged sound and professional they suffered from the common problem - too many words. Training resources designed for AQF 1 would challenge people doing a diploma. The training would most certainly challenge the average NESB worker.

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Training that relies heavily on giving information through talking and reading requires time and energy from both trainers and participants. As the training was mostly left for the already overworked managers, the tendency was to leave the course materials as they were and offer them when they could. That meant, on occasions, not offering them at all because of time constraints. When the training did take place, neither trainer nor participant particularly enjoyed the experience so the incentive to keep going was limited to necessity.

Review

In reviewing training technique, it became clear that a very simple fact about training had been overlooked. People learn in different ways. By relying on the spoken and written word a whole group of learners are overlooked – the hands-on learners. After testing a large number of the workers to see what kind of learners they were; visual, auditory or kinaesthetic, the overwhelming number tested as kinaesthetic. They learn by doing. Yet the training didn't accommodate them at all. Just like school really. The hands-on learners are frequently not catered for, as this style of teaching is more resource based and takes more time to prepare.

Could this factor have been included in the initial interview? Are there any reasons why this would have been inappropriate?

Those involved in the training were asked the question, "What do you want the training to achieve?" The answer was mainly; "changes in the way people do things." These changes may be working safer, more hygienically, using better techniques to increase production or changing behaviours. Evidence strongly suggested that when people attended training that consisted of talks and the occasional group discussion nothing much changed as a result, but when they were able to do activities and have a bit of fun, the results were obvious straight away.

What workplace outcomes should be measured to determine the effectiveness of training?

Reassuring in-house trainers that they could let go of the training materials and try something more hands on was a struggle at first. Yet when, with assistance, they redesigned their training to include far more hands-on activities they needed no further persuasion. The trainers even enjoyed the process! From having 75% information and 25% activities, the participants now experienced the opposite. Shrieks of laughter could be heard from the training room instead of dead silence. People come out smiling and talking instead of yawning.

Outcomes

In the absence of a LLN specialist what strategies could a mainstream trainer use to ensure that participants 'know what is going on'?

The results were obvious as well. Behaviours changed. For instance, one issue in the workplace was too many people not bothering to wash their hands properly. Instead of being told to wash their hands (and they knew they should anyway), the participants in the food safety training were "contaminated" with luminous powder without their knowledge. The trainer asked them to wash their hands and then demonstrated how much of the contamination still remained even after washing. She demonstrated correct hand washing and they copied in role-play then in reality. Another sweep of the ultraviolet light indicated that at last the hands were clean. The lesson was learned. Even those with limited English got the message! The rest of the training involved pieces of food being thrown on the floor, people getting dressed up, laminated photos being inspected for mistakes and a dozen other hands-on activities. No-one fell asleep, there wasn't even a yawn.

The literacy teacher backed the mainstream training up with the NESB group who used the content of the training to increase their vocabulary and reinforce their learning. They didn't need to be fluent in English to attend the mainstream training and anything they missed could be added in later during the NESB class. Previously it was assumed that because they had attended training they knew what was going on. No such assumptions have since been made.

Naturally success in a project such as this required the support of the company and this was forthcoming. Management was reassured that the training would produce results. With workplace assessors checking competencies on-the-job after the training the evidence was empirical. The workers benefited not just by getting interesting, relevant and fun training, it also gave them credit towards their certificate. With off-the-job training and on-the-job assessing, nearly all of the 250 workers were expected to graduate with their certificate by the end of the year.

Conclusions

The culture of training has changed. Workers are far more involved with opportunities for them to train as assessors and trainers. Management is involved and enthusiastic. The training programs themselves are interesting and effective and the training system is user friendly.

The motto in the training section is "use less words" and it seems to be working.

The Course in Applied Vocational Study Skills (CAVSS): Team teaching as a strategy for integrating literacy in VET

Susan Bates

Introduction

The recently developed Course in Applied Vocational Study Skills (CAVSS) employs a team-teaching or tag-teaching methodology to deliver learning support to Vocational Education and Training (VET) students. After initial trials this strategy has attracted significant interest and support from VET students, lecturers and training managers in Western Australia and other states.

CAVSS was developed to meet a need that had been identified by VET providers long before the advent of Training Packages. CAVSS was *not* designed to, and cannot, replace the delivery of national communications modules or any of the post-Training Package implementation strategies used to teach and assess literacy and / or numeracy-based skills which underpin industry units of competence. But some aspects of the CAVSS model, particularly the team-teaching methodology, and some of the lessons learned from the CAVSS pilots, may be valuable for those considering similar innovative approaches to addressing language, literacy and numeracy in the delivery of Training Package qualifications.

This case study provides a brief background and description of CAVSS, including the differences between the language, literacy and numeracy needs addressed by CAVSS, and language, literacy and numeracy competencies in Training Packages. It includes a discussion of some of the findings from the research into the pilot deliveries of CAVSS in Western Australia in 2000, in particular the implications for using a team-teaching approach.

How could aspects of the CAVSS approach be used in a less formal training setting?

LLN in the delivery of Training Package qualifications in Western Australia

In Western Australia, training providers are still grappling with problems associated with delivering and assessing workplace language, literacy and numeracy competencies in Training

Package qualifications. It had been common practice in Western Australia for TAFE VET sections to employ communications lecturers to deliver the national communications modules in VET courses.

Is the linkage of funding and management of training to units of competence limited to Western Australia?

Most Training Packages do not include language, literacy and numeracy skills as discrete units of competence, but instead, make reference to those skills as underpinning skills for other units of competence. The issue for Western Australia is that the funding and management of training is directly linked to units of competence. This is regardless of the degree to which language, literacy and / or numeracy skills might underpin any unit of competence.

History of CAVSS

The Course in Applied Vocational Study Skills was developed and accredited in Western Australia in 1999, with funding provided by the Western Australian Department of Training and Employment.

CAVSS has a long history. From the early 1990s, a number of TAFEs and private providers were funded to trial various approaches to providing integrated literacy support to students undertaking 'mainstream' Vocational Training and Education (VET) courses. These trials reflected the increasing recognition that students enrolling in VET courses did not have all of the basic literacy and numeracy skills lecturers expected would be acquired at school and that would be required for successful completion of a VET course. The trials also reflected the common experience that withdrawing students from the VET courses for literacy and numeracy classes, running remedial classes after hours, or demanding that students undertake bridging modules was unacceptable to the students and therefore not effective.

The accredited CAVSS was designed on the basis of those trials, incorporating a number of non-standard features to allow for a strongly student-centred approach. It was in part designed to address the stigma that prevents many students from accessing literacy support. The aim was to ensure that delivery was cost-effective, acceptable to students and that it actually improved course outcomes. CAVSS is a team-teaching model for delivering literacy support as it is needed, wholly within the industry training environment, and wholly related to industry

training outcomes. The course was piloted in 2000 by thirteen West Australian TAFEs, and has won strong approval and support from those involved in the pilots, including students.

However, some of the differences between CAVSS and language, literacy and numeracy in Training Packages are still not well understood. The differences have been confused with the delivery of Training Package language, literacy and numeracy competencies.

CAVSS and LLN in Training Packages

CAVSS is designed to fill the gaps in basic literacy skills that a significant number of students still have after leaving secondary school.

Examples

> It is likely that some students in a metals course will not be able to learn how to transpose formulae because they do not have an adequate understanding of basic ratio or fractions concepts. Some students in a community services course will not be able to develop record keeping skills because they do not understand basic punctuation and how to structure sentences. Many VET lecturers would like to be able to assume that all students enrolling in their training courses already have basic literacy or numeracy skills and concepts (including ratios, fractions, punctuation and structuring sentences). The reality is that a significant number of students do not have these foundation level skills and concepts.

The language, literacy and numeracy skills that underpin, Training Package units of competency are generally higher level, industry specific applications of foundation level literacy or numeracy skills. CAVSS provides a way of teaching students those foundation levels skills where they are missing.

Is it fair to say that CAVSS relies more on teaching than assessment practices?

The CAVSS teacher's role is to identify skills gaps, diagnose the basic skills that many or some students need to learn or revise, and to teach them. While vocational lecturers may be well able to teach students to apply basic skills such as transposing formulae or writing reports they do not necessarily have the expertise or the time to teach such things as fraction concepts, or skills related to sentence structure.

Team teaching

In what VET learning environments would CAVSS not be suitable?

CAVSS teachers spend up to four hours per week with each 'group' of students and team-teach with the vocational lecturer in the VET learning environment. Team-teaching means taking turns with the VET lecturer to teach the whole class, or to move around the class working with individual students. The team-teaching methodology is central to normalising the issue of literacy support, and students have indicated their strong support for the model.

As with any training, some students make much more use of the CAVSS teachers' expertise than others, but all students have access to and are regularly taught by the CAVSS teacher.

If improving completion rates is the strength of CAVSS what are the potential pitfalls?

CAVSS is non-assessable. CAVSS is primarily a means of funding a specialist teacher with the purpose of improving training completion rates. There is no reason, or justification, for assessment. On the other hand, formal skills recognition processes are applicable for language, literacy and numeracy competencies in a Training Package qualification, as with any other competencies required by the qualification.

The 'content' of CAVSS is not industry specific and can be applied to any course, at any level, in any industry group. The delivery of CAVSS requires CAVSS teachers to identify where students' literacy-based skills gaps do not allow the acquisition of industry competencies and to teach those foundation skills.

One of the reasons for integrating language, literacy and numeracy in Training Packages was to achieve a high level of industry-specificity. One of problems with employing lecturers from academic backgrounds has been their lack of industry knowledge, including a lack of knowledge about industry language and communication cultures.

Would you be able to implement this strategy within a working context?

The *A New Assessment Tool* professional development kit, developed as part of the Department of Education, Training and Youth Affair's (DETYA 1998) Workplace Communication in Training Packages project, identified team-teaching strategies as options for delivering and assessing language, literacy and numeracy competencies in Training Package qualifications.

The team-teaching approach prescribed for CAVSS relies on a high level of collaboration between lecturers to bring together two different areas of expertise. It has been the most important element in the effectiveness of the course.

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Research findings

The CAVSS pilots conducted last year across Western Australia were the subjects of a research project that included comprehensive surveys and selected interviews with participants. Some of the findings regarding team-teaching are discussed below.

Students approved of the team-teaching approach. The combination of two sets of knowledge and experiences provide students and both teachers with access to a wide range of expertise. VET lecturers gain knowledge about literacy and numeracy and teaching strategies from the CAVSS teachers. CAVSS teachers gain knowledge about the industry and its culture from the VET students and lecturers.

Team-teaching raised literacy awareness among VET staff. VET lecturers became more able to recognise where a 'problem student' was in fact a student dealing with a literacy problem. The team-teaching model offered a solution to the difficulty in teaching and assessing language, literacy and numeracy skills that have been integrated as underpinning skills within separate Training Package units of competence.

Bringing language, literacy and numeracy teachers into the VET learning environment to work collaboratively with VET lecturers was found to be more complex than it first appeared. Teachers found that collaboration takes time. They had to get to know each other, trust each other, share knowledge about the course and negotiate strategies for sharing teaching roles.

Lecturers felt it was important to be able to choose whether or not to participate in team-teaching. Many VET lecturers were worried that their teaching skills and their own literacy skills would be judged by the literacy teacher.

Careful selection of literacy teachers was found to be a factor that contributed to the success of the CAVSS program. Some literacy teachers who had a limited understanding of the diverse nature of literacy and language cultures, assumed that their own literacy practices were generic. They sought to impose academic literacy standards on industry training activities and requirements. Other literacy teachers felt that there were 'standards' to be maintained, and saw industry-appropriate ways of communicating as sub-standard. Some literacy teachers found it very difficult to stop trying to teach the 'whole world'

of literacy, and to both stay within the context of the VET content and the students' support needs. One CAVSS teacher argued that teaching within such a narrow range was educationally unsound.

Successful integration required literacy teachers to have a genuine interest in, and respect for, the talents and skills of industry workers. The most successful CAVSS teachers were those literacy teachers who were comfortable learning from their VET students, and genuinely exchanging skills.

Conclusions

To what extent is CAVSS a sustainable approach to LLN delivery in Training Packages?

The delivery of CAVSS has already developed links and networks between the industry and academic sections in TAFEs in Western Australia. It has raised awareness of the impact of literacy on training outcomes, and the effectiveness of a fully integrated approach.

CAVSS has demonstrated that literacy teachers need a complex set of professional knowledge, interpersonal skills, and personal attitudes to be accepted and effective in an industry training environment. Where teachers have all of those attributes, team-teaching is well accepted and effective.

CAVSS has served to highlight some of the differences between good, and sub-standard literacy teaching practices. Team-teaching has been crucial for CAVSS in effectively breaking down the stigma associated with needing literacy support. But regardless of the methodology teaching and learning activities must be wholly relevant to the training goals of the students. It is not a new idea.

Those interested in trialling a team-teaching approach to Training Package delivery might use the lessons learned from CAVSS as a basis for selecting language, literacy and numeracy teachers. Where possible, they might also seek out teachers with successful experience in delivering CAVSS who will have the complex set of literacy specialist skills necessary, and, as well, significant knowledge of the industry culture, industry competencies, and the VET students' talents, goals and dreams.

For more information about the Course in Applied Vocational Study Skills, contact Margaret McHugh at the Western Australian Department of Training on 08 9235 6075.

Finding the best training options to meet organisation goals

Bruce Milne

Introduction

This case study provides an example of how training packages can be used as a vehicle to achieve many enterprise goals.

Training and assessment options can be developed to maximise benefits to both enterprises and their workers. In this case, a relatively simple idea for training to implement a quality control system was used to initiate widespread implementation of the relevant Training Package. For employees this creates access to accredited training and career pathways.

Why would an organisation want to develop its own training infrastructure?

In addition, the enterprise reaps long term benefits from the development of its own training infrastructure.

This model also demonstrates what can be achieved at a relatively modest cost to the enterprise through the utilisation of existing on-site personnel and resources.

Training need: implementation of a QC system

An employer in the food processing industry identified the need for training but required assistance in identifying training / assessment options for implementation of a Quality Control system. The enterprise employed over 200 workers. The majority of these possessed no formal vocational qualifications, especially amongst production staff. A number of qualified but relatively inexperienced assessors were also employed on the site.

A flexible, cost effective delivery option

To what extent is this kind of strategy dependent on WLS or external support?

In collaboration with management, a flexible and cost effective delivery option was developed. For the enterprise this ensured the delivery of accredited training, career pathways for workers and the creation of a sustainable learning environment on the site.

The chosen option contained the following features:

- Workers would obtain formal training in the implementation of the new quality system
- Assessment in operating the new system would allow workers to gain accreditation against five units of the Food Processing Training Package
- The enterprise's on-site assessors would conduct assessments. Experienced assessors from Workplace Learning Services would mentor them through this process.

What organisation goals would the pool of assessors help to realise?

This would lead to the following benefits:

- Quality assessment systems would be developed and applied. The assessment tools and materials would also have long term applications
- While not gaining further accreditation, on-site assessors would benefit greatly from the mentoring process and the experience afforded by the program
- The enterprise will benefit through the creation of a pool of skilled and experienced assessors who will help the company realise long term training goals in a cost effective manner.

Figure 9 – Identification of training and assessment options within the framework of training delivery

Conclusions

The critical component of the process (see Figure 9) for this organisation was the identification of assessment and training options. The consideration of available options facilitated by Workplace Learning Services led to the development of appropriate training strategies that not only satisfied organisational requirements but also provided benefits for employees in the form of accredited training and improved workplace skills. The selection of an appropriate training / assessment option in this case led to several mutually beneficial outcomes for both management and employees.

What future role might the assessors have?

Part 4 Addressing literacy and numeracy at the industry level

Part 4 considers ways that literacy and numeracy can be addressed at an in industry-wide level.

Ruth Bakker writes about the processes used by the sawmill industry in one state to achieve positive outcomes for enterprises and employees.

Helen Fletcher considers an approach used by a cooperative of pig farming companies in one state to address literacy issues within the Pig Production Training Package.

Addressing issues in sawmills

Ruth Bakker

Introduction

A number of successful Workplace English Language and Literacy (WELL) programs are addressing identified literacy and numeracy problems in the forest industry.

Surveys of one state's sawmill industry conducted by an industry organisation in 1995, and the state's Forest Industries Training Board in 1996, revealed that over 30% of sawmill workers were not functionally literate. It was important for the industry in that state to take whatever steps possible to redress the safety, productivity and personal esteem issues associated with this extensive problem.

How could the effectiveness of these long-term projects be assessed?

WELL funded projects:

Member organisations within the industry have sought to address literacy and numeracy issues through the following different projects:

- "Branching Out" followed by "Growing On": Forest Skills Development Inc. (FSD)
- Forest Industry Training Board: Country Sawmillers Project
- Forest Industries Association (FIA): Crown Millers Project
- TAFE: regional Forestry Project

The features of each of these projects are described below and illustrated in Figure 10.

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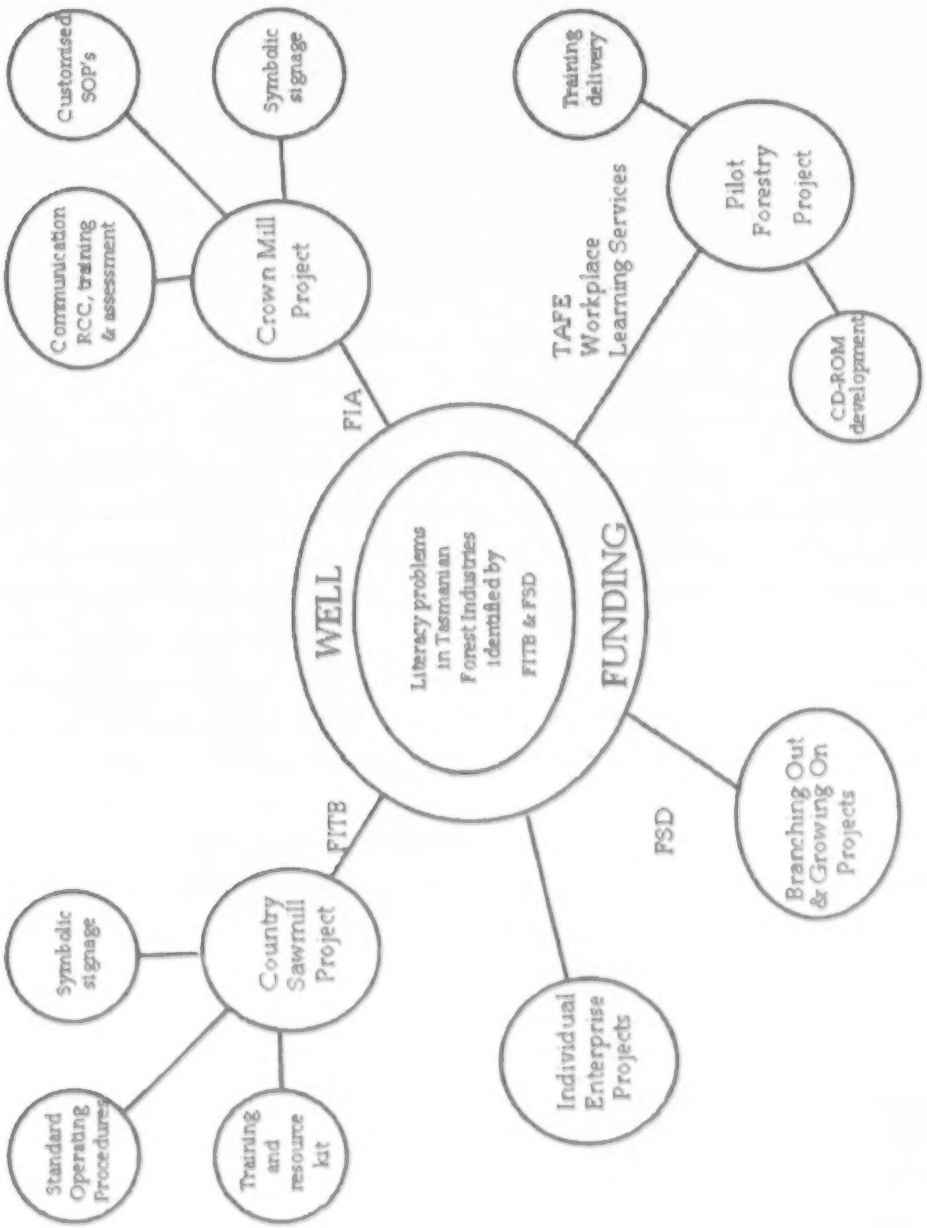
Figure 10 - Addressing issues in Tasmanian sawmills mind map



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"Branching Out" and "Growing On"

The "Growing On" project was developed to update Branching Out (developed in 1994) as a strategic plan for literacy and numeracy in the forest and forest products industry. This report recognised the lack of a training culture in the industry and the need for systematic examination of communication in the forest industry.

What kinds of skills would need to be addressed to make the necessary improvements?

The project brief was to:

- examine the literacy and numeracy demands of work in the forest industries
- investigate the current literacy and numeracy skills of the workforce
- identify any areas in which improvement was needed and
- develop a literacy and numeracy strategy plan and provide recommendations.

It was concluded that for the industry to improve its occupational health and safety record, increase productivity and allow the workforce to reach its potential, a number of skill areas needed addressing.

FITB Country Sawmill Project

This project commenced in 1998 and sought to redress literacy barriers through the use of plain English Standard Operating Procedures (linked to National Competency Standards), symbolic signage and the training of mill managers to deal with literacy problems in their own workforce. It was a great success with some excellent resources produced and assistance given to 97% of the mills targeted.

Would it be more effective to build literacy and numeracy skills instead of compensating for low literacy and numeracy levels?

FIA Mills Project

The resources developed in the FITB project were utilised by FIA to provide its members with literacy and numeracy support in medium and large hardwood sawmills. It is also intended to address communication problems caused by literacy difficulties by a process of Recognition of Current Competency, training, assessment and coaching against National Communication Competency Standards.

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North East Tasmania Forestry Project

Workplace Learning Services, a delivery team within the Institute of TAFE, developed a pilot literacy and numeracy resource for use in the forestry industry for workers with low literacy and numeracy skills. The resource is in the format of a CD-ROM which will address some of the learning barriers faced by workers in remote areas.

What issues arise when using CD-ROMs as a resource for low level LLN employees?

"Stack and Bind" and "Tally Material" contain integrated literacy and numeracy activities with outcomes from two units of competency from Certificate I of the National Forest and Forests Products Training Package for the sawmilling sector.

Trialing of the resource occurred in the north east of the state using a publicly funded Community Telecentre. Trainees, who were not computer literate, came in from a sawmill, and were taught how to use the mouse to work their way around the resource. Simplified print, a voice-over, and on-site activity visuals led the trainee through the steps of the units of competency. Interactive 'test your understanding' options ensured that the trainees remained engaged with the resource. At the completion of the program after workplace assessment, workers were given the opportunity to gain accreditation in both units of competence.

How could this project work without the assistance of the Community Telecentre?

As a learning tool this resource aims to promote independent learning and increase workers' awareness and confidence in the use of technology to achieve learning outcomes.

Bruce Finch, Executive Officer of the state Forest Industries Training Board, believes there is enormous untapped potential in the Community Telecentre, for both skill training and literacy training. There are a large number of these centres throughout the state, in large and small communities. Computers can be made available for individual and group training purposes, with technological assistance.

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> The industry has many workers with literacy problems who have managed to cover it up and cope over the years, but with increasing use of technology they can no longer do this. What we need to do is take these people and make them more comfortable with the proposition of increasing their skills and preventing them from becoming redundant in a technological society. I believe that we can do it through software like our pilot CD-ROM, and using Community Telecentres to get into those regional areas where, according to our surveys, the literacy problems in the industry are greatest.

Conclusions

Each project has tackled the issue of LLN from a different approach and feedback suggested that they have had a significant impact in addressing the literacy and numeracy issues identified in the forest industry.

Phil Smith is currently employed at Oztimber Limited, a softwood sawmill in the north east of the state and provided this industry perspective:

> We at Oztimber Tasmania have been involved in a number of WELL funded projects. The company had recognised the need to develop the level of communication skills and increase workers' awareness of changes in the worldwide competitive market.

A number of other results from the project were identified. One employer noted improved productivity among employees. This arose out increased confidence, improved communication and the ability to perform tasks that they were previously unable to do.

There were direct benefits for employees also. Apart from the acquisition of skills, participants received recognised accreditation and an opportunity to progress through a career path. The benefits extended beyond the workplace. Improved communication skills assisted family life and enabled some parents to better understand what was happening in their children's schools.

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On-farm training delivery

Helen Fletcher

The Company

The BGL Alliance is a major operator and employer in the Australian and New Zealand pig industries. The BGL Alliance has established an in-house training and development program for their employees that is nationally accredited and delivered through The BGL Alliance Registered Training Organisation. Several Australian companies contribute to the Alliance.

What advantages / disadvantages are there for an employer to become an RTO?

The companies own and operate a range of indoor and outdoor pig farms that are located strategically around Australia. Substantial expansion of the group's commercial operations in both Australia and New Zealand is in progress.

Could this model be utilised in other geographically isolated workplaces?

Training delivery

Given the geographic spread and rural isolation of the worksites, the Alliance has established a training program that is substantially conducted on-farm. Using the Pig Production Training Package, local on-farm trainers who are employees, work with trainees to help them complete the theory component of the program and assess practical competence (for example, artificial insemination). Regional trainers who are external specialists deliver more formal on-farm training sessions in selected theory components of the program (for example, the theory component of pig reproduction). Completed written modules are assessed centrally by an expert trainer and assessor.

What factors determine the success of the model?

The current training program focuses on necessary work skills and knowledge but the nature and diversity of operations is demanding increasing computerisation of record keeping and monitoring of performance. Most of the employees have had limited or no previous exposure to information technology

The current project

Where possible, BGL Training enters joint arrangements with other providers to expand the range of offerings to the trainees.

In mid 2000 the company was approached by a regional Agricultural College, which had received funding to deliver units of competency from the Pig Production Training Package.

It was decided to deliver the two computer units

BSATEC202A Operate a Computer to Gain Access to and Retrieve Data

BSATEC203A Operate a Computer to Produce Simple Documents

to selected stockpersons, supervisors and farm managers who needed computer skills as part of their work duties. The BGL Alliance farms in the south-east of the state were targeted for this program.

What are the benefits of providing a literacy specialist when delivering computer training?

The Agricultural College provided a computer trainer with specialist expertise in pork production and a bank of networked laptop computers, printer and projector to the farms for 16 - 20 hours of training spread over several sessions. As many of the trainees had never turned a computer on, the training covered areas such as editing a word document, entering data and reading instructions.

The BGL Alliance provided the services of a literacy specialist to assist trainees during the sessions and was on-hand when required.

Benefits of the program for trainees

The program provided several benefits for participants:

- access to computer hardware and a trainer skilled in needs of the industry
- support in use of software packages relevant to work duties and demands
- additional support available in classroom sessions and in separate individual tutorials to assist with computer literacy and general learning support
- the opportunity to be trained and assessed in additional units of competence for certification.

For the external training provider the benefits included:

- a cost effective and administratively simple way to take sophisticated training to rural and remote locations
- a coherent and stable training group with continuity of participation guaranteed

- a support trainer to assist with high demand learning needs at no extra cost to the provider of the specialist training.

For the companies of the BGL Alliance the benefits included:

To what extent to the industry's links to training specialists make a difference to the program?

- access to essential training and equipment that was outside the scope of the company's own delivery capacity
- access to a specialist trainer with expert industry knowledge to add value to the delivery
- an opportunity to address general literacy issues by integrating with a specific technical area
- an opportunity to access specialist and necessary training that is significantly subsidised by government
- a training program that has emphasised the concept of a learning organisation with senior managers, supervisors and leading hands participating together
- a course structure that has enhanced the ability to cater for widely differing abilities and skills.

Conclusions

Feedback from participants and workplaces has indicated that the provision of this training program has generated more interest, enthusiasm and demand for additional provision than any other previous offerings.

Partnerships are an important part of this case study. How do they work?

For the companies involved the training has addressed a real operational need that will enhance work performance. The training has been extremely competitive in terms of cost and is an example of government training subsidies making a very real contribution to the work skills of Australians living in rural and remote areas.

Part 5 Evaluating literacy and numeracy in Training Packages

Part 5 looks at the big picture regarding the background issues and contexts for the literacy and numeracy in Training Packages. After overviewing the main trends and issues in the theory and practice of adult literacy and numeracy, *Ian Falk* and *Pat Millar* provide a framework for evaluating literacy and numeracy in Training Packages. The section finishes with an analysis and synthesis of the main issues that have arisen from the case studies and models outlined in this volume.

Evaluating literacy and numeracy in Training Packages: A framework and some issues

Ian Falk and Pat Millar

Introduction

In the new Australian economy, it is widely recognised that literacy and numeracy are vital underpinning skills for effective and efficient training. Workers wanting to improve their skills and qualifications may require literacy and numeracy support, and this applies not just to basic skills but to complex tasks with their associated embedded complex literacy and numeracy skills.

Literacy and numeracy as social practice

Literacy is recognised as social practice (Fairclough 1989; Gee 1990, 1996, 1999; Lankshear and McLaren 1993; Street 1995; Barton and Hamilton 1998), integrated or embedded in the social context (Baynham 1996). The multiplicity of literacies for different purposes in different contexts has come to be known under the heading of 'multiliteracies' (Cope and Kalantzis 2000). The workplace involves its own particular kind of literacy. Like other literacy practices those of the workplace change and new workplace literacies are acquired through processes of formal and informal learning and sense making (Barton and Hamilton 1998).

Perceptions of numeracy parallel those of literacy. Varying numeracy skills are required to deal 'systematically [with] problems of concern in everyday life and [to] better understand the physical, economic and social environment in which we live' (Crowther 1959, quoted in Cumming 1996, p. 11).

Freebody and Luke (1990) and Luke and Freebody (1998) make the point that 'literate' people adopt four 'resource roles'. These four resource roles are: code breaker, meaning maker, text user, and text analyst.

The 'Code breaker' role includes basic skills associated with knowing the technology of the written symbols of the language, and understanding the relationship between spoken and written

symbols. The 'Meaning maker' role involves learners bringing their technology of code-breaking to the different structures of the various types of texts they encounter and the experiences portrayed in those texts. There is a matching up of the learners' own knowledge of the topic with a knowledge of textual structures. The 'Text user' role means that, in addition to participating in texts, learners must also assume the role of using texts in variety of situations, each with a different socio-cultural purpose. The 'Text analyst' role involves learning how to examine texts critically in order to gain understandings about sub-surface influences and themes and to find out why texts are written in particular ways to achieve particular effects.

Literacy and numeracy in training packages

Literacy and numeracy are considered to be vital underpinning skills for effective and efficient training (DEETYA [Department of Employment, Education, Training and Youth Affairs] 1996; Fitzpatrick and Roberts 1997; ANTA [Australian National Training Authority] 1998). Literacy and numeracy components of tasks are integrated into all aspects of working life involving skills both at a basic level and those required for more complex tasks (Askov and Aderman 1991; Courtenay and Mawer 1995). The connection between literacy and numeracy and job performance is highly complex (Hull 1993, 1997, 1999, 2000).

The intersection of literacy and numeracy with the vocational education and training (VET) sector was supported by ANTA throughout the 1990s. The integration of language, literacy and numeracy competencies in national Training Packages has been ANTA policy since 1995, following the decision that relevant underpinning literacy and numeracy skills and knowledge would be embedded in the core competencies specific to each industry sector (ANTA 1998; Fitzpatrick and Roberts 1997).

The training package approach is an integrated or 'built in' one (Wignall 1998), as opposed to separate provision of literacy and numeracy in classes or one-to-one tutoring. This is in line with research on transferability of skills, which suggests that the literacy and numeracy skills required for tasks integrated into the workplace context are believed to be more effectively acquired not in a separate learning or training context, but actually on the job, and on the work task (Mikulecky 1988; Askov and Aderman 1991).

Issues of literacy and numeracy in the implementation of training packages were a primary focus for the Adult Literacy and Numeracy Australian Research Consortium's (ALNARC) 2000 research program (Haines and Bickmore-Brand 2000; Kelly and Searle 2000; McGuirk 2000; Millar and Falk 2000; Sanguinetti 2000; Trenerry 2000). The recurring themes included concerns about practices of training provision, quality of trainers, the implicit (as opposed to explicit) inclusion of literacy within Training Packages, funding issues and access and equity issues. Many of the findings concern provision in the context of change, where the stated policies relating to training packages, particularly those around the 'built in' approach, are not as yet being reflected in practice with any degree of generality. The research suggested that literacy goals should be more clearly articulated and reflected in Training Package content. These findings were confirmed by Wyse and Brewer (2001) in research about language, literacy and numeracy and assessment processes.

From this overview of the literacy, numeracy and vocational education and training context, we now move to discuss the framework for evaluating the impact of literacy and numeracy in training packages on individual trainees, the host-organisations, and the selected model for provision.

Framework for evaluation

Any framework for evaluating literacy and numeracy in training packages must encompass the impacts of the needs analysis, the curriculum, the training itself, the assessment, and of course the short and long-term effects on the organization.

A good guiding question that encompasses these issues is:

> What might be an holistic structure and process for evaluating good practice in the delivery of integrated literacy and numeracy in Training Packages?

In this volume, the Workplace Learning Services (WLS) model (see 'Workplace assessment and training delivery model', Part 1, pages 3–17) in Tasmania was selected as representing an existing and well-refined synthesis of good practice, and documentation of the structure and process of this model was then 'tested' against different cases in which the model was applied in practice.

This volume is not only designed for use as a resource for the professional development of literacy and numeracy practitioners and policy-makers, but as a research and evaluation framework for gauging literacy and numeracy's impact on trainees and their organizations. The research and evaluation aspect of the project adopted a case study approach, employing qualitative analytic procedures (Lincoln and Guba 1985). Using an adaptation of the 'four resource roles of the literate person' (Freebody and Luke 1990; Luke and Freebody 1998), an evaluative framework was then developed in which the data could be matched along the Luke and Freebody (1998) two axes of Media of Communication and Roles of the Literate.

How does the evaluation framework work?

Training Packages specify outcomes, in terms of endorsed competencies and standards; they do not specify educational methods or the multiple ways the goals may be reached. The impact of integrated literacy and numeracy in Training Packages is determined in large part by the ways educators use them.

The WLS Model

The incorporation of literacy and numeracy competencies into Training Packages was intended to ensure that literacy and numeracy would be 'built in' to work tasks, not 'bolted on' or separately taught. Our examination of the Workplace Learning Services model (WLS) finds that it is committed to the 'built in' approach. The WLS process is entirely consistent with the structure and intent of Training Packages and of the competency-based assessment process.

The model is enterprise-based. Its essential feature, the enterprise-based trainer/assessor (EBAT), a literacy practitioner with Assessment and Workplace Training qualifications and experience, is selected for his or her best fit with the particular enterprise in the project. The extent to which an assessor is grounded in the culture of the enterprise has been recognised as a hallmark of good assessment practice (Wyse and Brewer 2001).

The WLS process is one of collaboration and teamwork with the enterprise. The EBAT and his or her enterprise-based partners form an assessment team. The team composition maximises site expertise. The team then has the shared responsibility for

designing and developing assessment and training activities to deal with the intermingled technical and communication issues pervading the units of competence in the training package.

Members of the team read and analyse the assessment guidelines and competency standards in the Training Package. They also study existing policies and procedures sourced from workplace documentation. They then identify the enabling and underpinning language, literacy and numeracy demands made of workers and the levels of these skills required. The team spends time with individual workers, observing the tasks and duties they perform as part of their job, and further identifying the language, literacy and numeracy issues of the workplace.

The team considers these key questions:

1. Do the tasks performed by workers align with the elements and performance criteria described in the competency standards?
2. Is it possible to gather enough evidence to demonstrate competence?
3. What evidence would need to be collected, how and by whom?

In the final stage of this pre-assessment phase, the EBAT interviews each employee as part of the Recognition of Current Competencies (RCC) process. The interview includes:

1. Taking the assessee through the standards and explaining how they apply in the workplace.
2. Providing opportunity for a preliminary self-assessment.
3. Identifying learning support needs.
4. Identifying assessment options/evidence sources.

Through this process, the EBAT develops an individual assessment/training plan in collaboration with the assessee.

In the project's second phase RCC assessments are conducted. The assessment team, working in collaboration with the assessee, begins the process of collecting multiple sources of evidence to support competencies against the relevant standards. This evidence typically consists of:

- Workplace observations

- Oral questioning
- Work samples
- Witness testimonials
- Workplace documentation.

Where language, literacy and numeracy skill gaps are identified, these are addressed in the context in which they appear, as on-the-job learning. The learning activities developed to achieve this skill development are planned to have direct relevance to actual workplace activity, or other training and/or strategic workplace developments.

In the final phase of the project, reports are written and assessment and training records are processed to meet reporting requirements. Qualifications are issued according to assessment outcomes.

The model in practice

The next step was to test out case studies of actual practice against the principles of the WLS model. The first case study selected was a WELL project where an EBAT from WLS worked with a Training Officer from a large food distribution company to form an assessment team from the grocery and general merchandise distribution centre (see 'Identifying enterprise goals and delivering needs', Part 3, pages 61–70).

The initial phase proceeded with the team developing a checklist while observing individual workers doing their jobs. The team considered the WLS model's key questions regarding National Standards and evidence. A customised assessment tool was developed, to be used in the warehouse to assess Units of Competence from Certificate I and II in the Transport and Distribution (Warehousing) Training Package, without taking the assessee off the job for lengthy periods.

Information meetings were then held, seeking expressions of interest from employees interested in participating. There was a good response. Each interested employee was interviewed to explain the standards and discuss the units being assessed for the person, work out an individual assessment plan, and identify learning support needs. A translation map was developed, relating the units of competence to the National Reporting System (NRS), by analysing each unit for Level of

Competence and Aspect of Communication, then matching each employee on to a table.

Assessment and gap training then occurred. The report of the project gives just one example of a skill gap identified – an employee with a difficulty calculating averages who was given lessons on the job.

Allen was able to understand the 'math' of the calculation after doing a couple of worksheets and discussing the problem with the trainer. He was then able to perform the calculation related to his job very quickly. The 'math' was contextualised into a workplace activity with which he was very familiar (Mitchell 1999). The employee was then 'reassess[ed] as competent' (Part 3, p. 70).

Another example of language, literacy and numeracy support dealt with problems with the Accident and Injury Report Form (Part 3, p. 72). Many employees had difficulty with the form. It was decided that the form had design faults. It was redesigned.

> Employees' outcomes were then tallied on to an NRS master table. The WELL report was written up. Qualifications were issued according to assessment outcomes.

This project was faithful to the WLS model. The EBAT was well grounded in the workplace culture, and was able to set up effective collaboration networks within the enterprise.

> As an integral, on-site trainer [the EBAT] is in an ideal position to provide assistance ...[which] ... directly helps the employee and gives clear outcomes to management who may not see the value of prolonged training courses. (Mitchell 1999)

The focus of the project was on assessment. Little information is provided about gap training.

Another project is described in 'Integrating LLN into gap training and assessment' (Part 2, pages 23–26. The context here was the administrative/clerical section of a local government authority. The aim of the project was to upskill workers in quoting and estimating, and computer literacy. Once again, the EBAT worked in collaboration with management and trainees. The project allowed participants to learn and practise the required skills in the context of typical workplace requirements, and also to generate evidence for the purpose of assessment through the quotes that they were preparing as part of the learning process (see p. 26).

Some trainees had problems with calculations and were given numeracy support by the EBAT. 'The numeracy training was not separate, but built into the skills required for quoting and estimating' (p. 25).

Other case studies in this volume refer to literacy and numeracy support training as part of the Training Package assessment process, but provide less of the detail required to test on-site practices against the principles of the WLS model. Low literacy and numeracy skills in the forest and forest products industry ('Addressing issues in Tasmanian sawmills', Part 4, pages 93–97) are problematic in training, and an attempt is being made to address these 'by a process of Recognition of Current Competencies, training, assessment and coaching against National Communication Competency Standards' (p. 95). This process would appear to be similar to the one used in the food distribution company project previously described in Part 5 (page 110).

Understandings of literacy and numeracy in the WLS model

The generic language of Training Packages, competencies and standards has to be made meaningful in each particular industry or workplace context. The WLS model allows for this process. But each workplace has its own multiliteracies, and gap training does not allow the WLS model to address these.

The following table, an adaptation of the 'four resource roles of the literate person' (Freebody and Luke 1990) provides an evaluative framework in which the data from this study can be matched along the two axes of Media of Communication and Roles of the Literate.

Table 3 – Communication media and roles of the literate (adapted from: Freebody and Luke 1990)

Roles of the Literate	Communication media	
	Oral	**Print**
Code Breaker	The WLS model addresses the worker's role as code breaker in the immediate context of the workplace and the assessment process. It engages him/her with the technology of the written symbols of language associated with standards and his/her performance of work tasks. The model allows the worker to express his/her understanding of the relationship between spoken and written symbols of language.	The model addresses the worker's role as code breaker in the immediate context of the workplace and the assessment process. It engages him/her with the written symbols of language in Training Package standards, and also with those in text materials which are involved with work tasks.
Meaning Maker	The model addresses the worker's role as meaning maker within the immediate context of workplace and assessment process. It allows him/her to match up his/her own knowledge of the workplace with knowledge of textual structures involved.	Within the immediate context of workplace and assessment process, the model allows for the worker to bring his/her technology of code-breaking to the different structures of the various types of texts encountered, and the experiences portrayed in those texts.
Text User	The model addresses the worker's role as text user, within the immediate context of workplace and assessment process. He/She must engage with relevant texts, in order to discuss standards, work tasks, and his/her assessment process.	The model allows the worker to assume the role of using texts, but only in the immediate context of his/her own job tasks and performance.
Text Analyst	This 'critical literacy' role is not specifically addressed by the model. It is not clear from the example of the Accident and Injury Report Form (Part 3, p. 70), if workers had any input into a critical evaluation of the form, or its redesigning.	The model does not specifically address this role.

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The WLS model is constructed within a framework that focuses on targets and outcomes in work performance: 'Participants access gap training to meet identified learning needs. Further assessment and re-assessment opportunities are provided until competency [is] demonstrated' (from Figure 1, p. 4). Literacy and numeracy here are located within a human capital model, allowing individual needs to be addressed in terms of basic skills deficits within the narrow context of the job task and the assessment process. The model responds to the perceptions of workplaces, which have industry core values relating to productivity and cost-effectiveness.

When the model is tested against a holistic goal, represented by the adaptation of the Freebody and Luke 'roles of the literate person, it is clear that, while assessment objectives are being achieved, workers' broader literacy and numeracy needs are not being addressed.

Issues arising

This section sets out in point form the issues and related question for reflection and discussion that arise from the evaluation so far.

1 Measuring success

- What are the benchmarks of a successful workplace LLN program? (Are these measured in terms of performance, organisation objectives, skill levels?)
- Is achievement of competencies enough of a measure to indicate success of a program?

2 Integration of LLN into Training Package competencies

- Does integration result in a lessened focus on LLN issues?
- The case studies showed that literacy and numeracy specialists were widely used to support delivery. Is it realistic to expect that LLN underpinning skills will be addressed where specialists are absent?

3 Information Technology and literacy and numeracy training

- Is Information Technology literacy a pre- or co-requisite for workplace LLN?

- What role should Information Technology play as a medium for delivery of LLN?

4 Delivery issues for workplace LLN

- Is there a case for 'dumbing down' workplace literacy requirements to meet the needs of the 'lowest common denominator' (for example, standard operating procedures expressed in plain English, or reworded workplace documents as referred to in Part 2, page 39)? Or should there be a focus on raising the minimum standards to meet the ever increasing demands of work and lifestyle (for example, the OHS demands of chemical labelling)?
- CAVSS (Part 3, pages 81–86) was shown to be effective and popular among trainees. To what extent is it a cost-effective or sustainable model? Is it compatible with on-the-job delivery models?
- Teaching vs assessment: Training Packages rely heavily on assessment while the case studies showed that LLN delivery relies on tutors / teachers (see Part 3, pages 61–70, and pages 75–79). Do these apparently different approaches result in tensions for the delivery of Training Package competencies and underlying LLN skills?

5 Impact of industry collaboration and partnerships

- Two case studies (Part 4, pages 93–101) showed successful industry-wide approaches to delivery strategies. They point to significant benefits arising from partnerships between industry groups and training providers. The reasons for the apparent success were not explored, but there may be something in this that can perhaps be applied in other industry groups.
- How does an industry-wide approach fit with an essentially enterprise based system of delivery? Where does the industry intersect with the WLS workplace assessment and training delivery model?
- The idea of partnerships was not explored in the case studies, but 'On-farm training delivery' (Part 4, pages 99–101) alluded to some benefits. This aspect is in need for further research.

Conclusion

Delivery of integrated literacy and numeracy in Training Packages is commonly geared to the immediate and short-term needs of industry and workplaces. Measured against the holistic goal of addressing the needs both of the worker as a 'literate person' and of the sustainable, cost-efficient and longer-term goals of the workplaces themselves, the objectives of those who negotiate and coordinate the delivery of literacy and numeracy in an assessment setting are often limited to gap training for the immediate context. This leaves for further investigation the question of how workplace 'built in' literacy and numeracy programs can cater for literacy and numeracy learning that falls outside the short-term 'basic' skills of reading and writing. Further research is indicated in identifying the practical benefits to industry of building in literacy and numeracy learning that caters for the longer-term goals of both individual learner, and the learning organisation.

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Workplace communication:

Making Language, Literacy and numeracy in training packages work

More and more people in Australia are doing training through Training Packages. Training Packages are popular among employers because of the flexibility they offer and because of the way that skills and knowledge learned can be applied directly to the enterprise. They are popular among employees because they offer a way of accessing an accredited qualification and a pathway to a better career.

At the same time there is growing concern about the increasing literacy and numeracy standards required in workplaces. How do those with low level literacy and numeracy skills benefit from the opportunities presented by Training Packages? In theory, literacy and numeracy standards are embedded within the requirements of a Training Package. But how does this work in practice? How can workplace trainers and literacy and numeracy practitioners ensure that literacy and numeracy standards are maintained?

This book offers practical insights from workplace language, literacy and numeracy practitioners in Australia and shows, through a series of case studies, ways in which some organisations are addressing the issues of workplace communication through Training Packages.

The book has two functions. Its primary function is a professional development resource for language, literacy and numeracy practitioners and others involved in enterprise based training provision. Its second, though just as important function, is to provide a framework for evaluating the impact and effectiveness of workplace language, literacy and numeracy programmes through a well-researched strategy.

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